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EDITORIAL—SOME HIGHLIGHTS

I. General Economic Scene

State :

Fifth Plan: The Fifth Plan for the State is now established at Rs. 1,214.26 crores in what is known as the State sector, which has involved a scaling down of the first draft of Rs. 1,532 crores presented to the Union Planning Commission. The major reductions have been in the minimum needs programme, social services and irrigation. There are 14 Central projects on which the total Fifth Plan for the State remains unaltered as negotiating points with the Union Planning Commission (See Vol. III page 615). The breakdown of the Fifth Plan allocation is :

Sectoral Allocations

Head of Development		(Rs. in lakhs)
1. Agricultural Research and Education	...	5,66
2. Crop Husbandry	...	25,30
3. Minor Irrigation	...	58,56
4. Soil Conservation	...	9,12
5. Command Area Development	...	1,50
6. Animal Husbandry and Dairying	...	18,40
7. Fisheries	...	18,80
8. Forests including cinchona	...	9,00
9. Storage and Warehousing	...	50
10. Co-operation	...	21,56
11. Community Development and Panchayats	...	17,77
12. Agricultural Credit	...	15,00
13. Agricultural Marketing	...	1,10
14. Projects/Programmes of Rural Development and Employment	...	1,00
15. Irrigation and Flood Control	...	70,00
16. Power	...	326,00
17. Large and Medium Industries	...	38,00
18. Mineral Development	...	1,50
19. Village and Small Industries	...	39,98
20. Roads	...	64,30
21. Road Transport	...	21,00

Head of Development		(Rs. in lakhs)
22. Ports and Harbours	...	4,50
23. Other Transport (Inland Water)	...	1,50
24. Tourism	...	2,05
25. General Education including Cultural Programmes	...	77,37
26. Technical Education	...	10,75
27. Health	...	50,00
28. Nutrition	..	57,14
29. Water Supply	..	93,00
30. Housing	...	60,00
31. Urban Development	...	25,00
32. Welfare of Backward Classes	...	24,00
33. Social Welfare	...	10,00
34. Labour and Labour Welfare	...	3,70
35. Statistics	...	1,90
36. Information and Publicity	...	40
37. Special and Backward Areas	...	3,50
38. Evaluation Machinery (Planning, Machinery etc.)	...	·40
39. Administrative Buildings	...	25,00
Total	...	1214,26.

Perspective Plan: The State Planning Commission presented on December 20, 1973, to the Chief Minister, Chairman of the State Planning Commission, the Perspective Plan for Tamil Nadu for 1974-84. The Plan is divided into 6 sections. The first section starts with the methodology used in building the Perspective Plan and its main components, an assessment of two and a half decades of Planning and a profile of Tamil Nadu's resources and institutions at the end of the Plan period. The second section describes in terms of policies and strategies the seven goals of the Perspective Plan and where appropriate quantifies them. The third section summarises the perspective plans established by the Districts in the 23 district plans as analysed in Vol. III pages 155, 156, 225-227, 309-312 and 396-398. The fourth and fifth sections set forth the Perspective plan programmes in physical and human infrastructures and in the production sectors. The sixth section deals with the perspectives of backward areas, R & D and implementation patterns. The Plan ends with the financial implications and perspectives in this approach from the point of resource mobilisation, public debt and fiscal policy. The perspective plan thus sets forth the profile of Tamil Nadu over the next 10 years against which the medium term plans and the annual plans can be drafted. The Plan is goal oriented and not resource based, it is concerned more with policy, strategy and programme trends and not with schemes, projects and targets. It has involved the participation

of the people at the district and block level and a whole array of official and non-official bodies, specialists and experts throughout the State. With the presentation of the Perspective Plan, the State Planning Commission has completed its first mandate (See Vol. I No. 6 pages 1-2).

Petrol : The November 3 rise in the price of petrol from Rs. 1.64 per litre to Rs. 2.71 per litre (See last issue Vol. III page 787) was accompanied in this State by a strike of petrol dealers which meant that for about 10 days from November 16 to 24, all petrol pumps in the State went dry and there was a perceptible falling off in vehicular traffic. The petrol dealers were agitating for a higher commission as their profit margin had been seriously eroded by the rise in prices and the decreased consumption of petrol. The Union government announced on November 24 an increased commission to the dealers in high speed diesel as is referred to later in this issue, and on this basis the pumps were reopened. But the agitation for a higher commission on petrol continues and being based on sound grounds will have to be met. The immediate effect of the rise in prices of petrol and diesel has been that all motor transport costs have increased—taxis by 25 per cent, auto-rickshaws by 10 per cent and bus fares and lorry charges by equivalent amounts. These charges are likely to increase further. Meanwhile the State government has restricted the consumption of petrol by department vehicles and staff cars to 75 per cent of that consumed in 1972-73. Various guidelines have been issued to government departments to save petrol and the savings effected will appear both in the revised estimates for 1973-74 and the budget for 1974-75. The government is also working on a scheme of petrol rationing which now seems inescapable for the Country. In November, the supply of kerosene to the State was less by 10 per cent at 27,716 tonnes but effectively distributed through cards.

Prices : The stabilising of prices in the State and City in October referred to in the last issue of the Bulletin (Vol. III page 773) did not hold in November and the forecast that the rise in petroleum and diesel prices would have an inflationary effect (page 787) was reflected in the prices of food articles in the month of November. The government extended the sales tax concessions first effected in September (See Vol. III page 616) for two more months upto Decemer 31. Pulses were exempted completely from the sales tax collected at 3.5 per cent at two points and edible oils were subjected to only a single point tax of 3.5 per cent. For the four month period the loss in government revenue was Rs. 50 lakhs on pulses and Rs. 30 lakhs on edible oils. Even so the price of coconut oil rose sharply from Rs. 13.50 per kg in October to Rs. 15 per kg in November and a less steep rise took place in groundnut oil, though gingelly oil prices held steady. It was the prices of vegetables which rose by 25 to 30 per cent during the month and in the case of some there was a 75 per cent rise—in part due to the seasonal decline in supply, and the higher transport costs in moving vegetables from Andhra and Karnataka into the State. The State has under examination a long term programme to convert the multi-point sales tax into a single point levy on all commodities. The Tamil Nadu Varthaga Kazhagam in a recent study points out that merchants in the State collected and paid by way of sales tax Rs. 120 crores per annnm. The rationalisation and simplification of this tax would therefore be in the interest of all concerned—the government, the trade and the consumers who pay the tax.

Power : The 15 per cent power cut rests on the government's computation

that the State's generation has since 1970-71 increased by 600 million units and its new agricultural and industrial demands have increased the deficit to 900 million units since. Another computation is that in the summer months when the irrigation stations are closed, the effective generation will be 1,371 MW against the State requirement of 2,010 MW. The installed capacity of the Tamil Nadu grid is 2,254 MW, comprising 1,224 MW from 17 hydro stations, 600 MW from the Neyveli and 430 MW from Ennore and Basin Bridge. The immediate relief in this situation is the agreement with Kerala under which the 6,00,000 units a day from October, (See last issue Vol. III page 774) has been increased to 1 million a day from November 2. The agreement provides for the supply of 300 million units for one year ending May 22, at the revised rates of 7.8 paise per unit for the first 100 million units and 8 paise for the remaining 200 million units as forecast in the last issue. In return the State will use this purchase for cement, yarn, tyre and chassis manufacture, so that the Kerala quota from those items will be fully met. The 1973-74 budget provides for a total capital expenditure on power of Rs. 43 crores, comprising Rs. 25 crores on generation schemes, Rs. 11 crores on transmission and distribution, Rs. 6.5 crores for rural electrification and Rs. 50 lakhs for acquisition of private electricity undertakings. Under the Tamil Nadu Electricity Private Undertakings Acquisition Act, the government on November 3, notified all private electricity undertakings that they will be taken over by December 1. The Chief Electrical Inspector as the Acquisition Officer has taken over the companies. As noted earlier (Vol. III page 619) this will introduce some uniformity in distribution. The long term (Fifth Plan) prospects are grim. As against the energy needs of 15,490 million units by 1978-79 (based on a 12.5 per cent annual growth), there will be a net deficit of 2,215 million units in that year (taking into account the schemes under execution and those that have been sanctioned). The new schemes sanctioned by the Union government are the Tuticorin Thermal Station (400 MW), Kadamparai pumped storage scheme (400 MW) and Suriliyar hydel scheme (35 MW). In addition 10 schemes for generating 790 MW are awaiting the Union government's clearance. Further long term plans include the offer of the government to finance the second stage of the Idikki project in Kerala and the Hogenekal project in Karnataka (See Vol. III page 694). With all this, the Fifth Plan power position is likely to be tight. For the present the lifting of the 15 per cent power cut should be examined by the government. The cut imposes hardship on continuous process industries such as aluminium, caustic soda, calcium carbide and cement. With the shortage and increased cost of crude, the operation of captive generators by industry is becoming a doubtful economic operation. With the full hydel reservoirs, an assured supply from Kerala, the assurance of 1,750 million units to the Tamil Nadu grid during the current year from Neyveli (which is 60 million units more than expected and 500 millon units over last year's supply) and the increase of 2,200 million units when the oil firing of 50 MW units takes place, plus the normal functioning of the Ennore plant, it should be possible to end this 15 per cent power cut and open the new year with a clean slate.

The power situation in the Country as a whole faces the long term problem of the supply being inadequate to meet the demand. For the Fifth Plan, the Union Cabinet has approved a target of 35 million KW, which ends the dispute between the Union ministry demand that it be 40 million KW and the Union Planning Commission's proposal of 33 million units (See last issue, Vol. III page 774). With

this settlement of the Fifth Plan power target at 35 million KW, the additional projects in the plan period must yield 16.5 million KW. The Union ministry is at last setting up a monitoring system to close the gap between the target and achievement.

Water: With the change in the ministership, the present Union ministry of irrigation and power is now reexamining the Ganga-Cauvery grid project along lines recommended by this Institute (See Vol. I No. 6 page 10, Vol. II No. 3 pages 3 and 36-37). To start with, it is now recognised that with the serious power deficit in the Country, the power for pumping up the Ganga waters throughout the grid is simply not available. Hence the new Union minister is now having examined the various regional links as a start, long advocated by this Institute. The Godavari -Cauvery link which will cost Rs. 2,900 crores and the various irrigation projects attached to it to provide water to the drought affected areas will cost another Rs. 2,400 crores. Similarly the Brahmaputra-Ganga link in the North is being examined. For the South the diversion of West flowing waters in Kerala should also be part of the study now underway. This approach will also be a means of softening, if not solving the water disputes around the Krishna, the Godavari and the Cauvery. On the Cauvery dispute, the studies are being concentrated on economising on the use of the waters. The wastage of water in our farming in the Country has been computed at between 40 to 50 per cent, (See Vol. I No. 8 page 3, No. 12 page 11). And so every effort made to save the use of Cauvery waters is welcome. The Union government has approved the Rs. 2.25 crores barrage across the Cauvery at the upper Anicut. It will control floods and increase the commendability in the Ayyan and Peruvalai channels which have an ayacut of 1,C00 acres in Lalgudi and Musiri taluks in Tiruchi district. This will correct the fluctuating supply of Mettur waters to the delta farmers who have no waters when the reservoir is closed during heavy North East Monsoon rains. The barrage would be a flood moderator and economise on the waters used for irrigation as urged in Vol. II No. 1 page 7, No. 9, page 5 and No. 11 page 2 of the Bulletin. In the area of water, the draft Bill to be presented to the Lok Sabha declaring water a national asset (See Vol. II No. 8 pages 9 & 10 and Vol. III pages 562-563) is being reviewed in light of the changes suggested by the States. This also is holding up the establishment of a National and State Council and the formulation of water policies at various levels.

Shipping: As noted when analysing the Tuticorin thermal project in Vol. III page 693 of the Bulletin, its clearance was based on transporting coal from Bengal and Bihar to Tuticorin by sea. In fact the port based thermal stations in the State will need 5 million tonnes of coal per annum. Apart from Tuticorin and Ennore, other projects like the one proposed at Cuddalore as well as the Cochin and Mangalore plants will make a heavy call on coastal ships to transport coal. Here the Country faces a serious shortage because it has neglected coastal shipping and allowed such coasters to become overaged and not be replaced. Now the State and the Country face a grim situation. With the present and future shortage in oil and its escalating prices, both power generation and industry are having to rely on coal and thermal power for their fuel needs. We have plenty of coal underground but our problems are (a) it is not brought out above ground quickly and adequately, (b) its transport by railways suffers serious delays due to lack of wagons, (c) the ports — Calcutta and Haldia—from which it must be shipped are in poor shape and (d) the availability

of ships is limited. It is against this background that the State has decided to set up the Tamil Nadu Shipping Corporation with a token provision of Rs. 1 crore during the Fifth Plan. The Union Planning Commission has enthusiastically approved the project. Coastal ships will be purchased by the Corporation from the Shipping Development Fund. The government is now undertaking the necessary feasibility studies to decide on the type of vessels to be acquired. There are further tasks involved in this area. There must be the closest co-ordination between the Shipping Corporation and Railways as noted in the earlier issue of the Bulletin. In fact the two services are complementary and not competitive. And then there is the problem of ensuring a quick turn around of the ships. In the initial stages it may be adequate to mechanise the coal take and discharge so that the ships can move fast, returning after discharging coal even without cargo. After the first couple of years, however, a return cargo must be worked out to make the service viable. Here cement suggests itself as an obvious export commodity. Salt which could have been also one such is now in short supply. There is need for a study of the type of return cargo from this State to other States on the ships that the Corporation will be acquiring.

Railways : At the end of November the work on the Rs. 23.7 crores Gudur-Madras-Tiruvellore Railway Electrification programme was inaugurated (See last issue, Vol. III page 783). The project will be completed by 1977. The first run will be between Madras-Gummidipundi. The electric trains will use multiple unit stock to enable each train to carry 1,600 passengers instead of the current 500. The time of travel will be halved. To facilitate the project, the government is supplying power at 7.5 paise per unit and has made available 100 acres for the terminal construction.

Bus and Road Transport : The Pandiyan Roadways Corporation's annual report is an interesting document on many aspects of road transportation. The Corporation has expanded its operations from 134 routes in 1972 to 315 routes by September, 1973, has increased its fleet strength by 312 vehicles, covers 23 new villages under a phased programme to cover all villages with a population of 1,500, deliberately incurs a loss of Rs. 30 lakhs per annum by operating on 40 unremunerative routes and has made a return of 18.2 per cent on its capital of Rs. 108 lakhs for the year ending 31st March 1973. It takes an integrated view of road transportation and operates on R & D programmes on bullock cart transportation. The Country has an investment of Rs. 670 crores in 102 lakhs of bullock carts, employing 1 crore of persons, carrying 20 crore tonnes of goods per annum and serving as the major transport for our 5 lakh villages and the 50 per cent living below the poverty line. The Corporation's R & D effort is aimed at improving the bullock cart and making it an all purpose vehicle. It raises the question as to whether it would not be more economical to pension bullock cart owners in cities to allow a free flow of traffic. Another issue raised is with regard to roads. Of the 19 lakh kilometres of roads, 35 per cent are surfaced, 30 per cent are all weather motorable roads and 35 per cent kutcha roads. The report refers to the Keskar committee estimate that our buses and trucks are losing Rs. 150 crores per annum as a result of the bad conditions of our roads on the basis of the cost of operating a bus per kilometre being 60.8 paise on cement concrete roads, 78.2 paise on black top roads, 100 paise on a kutcha road and 122.9 paise on a water macadam road.

The higher cost is due to fuel consumption which is 25 per cent higher on a poor road and the wear and tear of spare parts. A question is posed as to the roads policy. Should new roads in neglected areas be preferred to upgrading existing roads in developed areas? Should preference be given to building 100 miles of Kutcha roads to 50 miles of first class roads? These are questions of transport economics which must be seen within the terms of total transport planning. Following the recommendation of the Special All India Committee on metropolitan transport development, the legislature adopted in November a bill to reduce the Motor Vehicles tax on city buses and waive the 6 per cent interest on the loan to the Pallavan Transport Corporation. The State has also asked the Union government to implement another recommendation of the Committee to exempt chassis and diesel oil used by city buses from excise duty. This will save the Pallavan Transport Corporation Rs. 1.6 crores which can be used to increase and improve its fleet strength. In view of the steep rise in petrol prices, the demand for city bus services has increased to the point where the Corporation is putting 100 additional buses on the road. Also to help the people travel more cheaply, the government is planning to increase the licenses for auto-rickshaws in Madras and other urban centres. The legislature has also adopted a bill—the Tamil Nadu Hackney Carriages (Amendment) Bill—which prohibits the plying of hand rickshaws in the State. This is a Welfare measure aimed at eliminating what the bill calls "the demeaning occupation" of rickshaw pulling. It may be noted that within two decades, the concept of human rights has risen in the State to this point.

Telephones: The Rs. 93.20 lakh telephone exchange at Kodambakkam was inaugurated in early November 1973. It has an initial capacity of 3,000 lines and will be expanded to 10,000 and has taken over 1,932 lines served by the Mambalam, Kilpauk and Mount Road exchanges. All OYT applications have now been cleared, though the backlog of 11,048 other regular applications has been only partly relieved. The next cross bar exchanges will be installed next year in Adyar and Kellys. STD services with Hyderabad, Vijayawada and Tirupathi will begin in mid 1974, and with Vellore and Delhi by the end of 1974. The telephone service in this city is the most satisfactory of all the urban centres in the Country.

Housing: The government has under study a scheme for construction of houses on ownership basis by journalists. On November 7, 1973, the Slum Clearance Board opened 300 tenements at Chepauk, bringing the total number of tenements constructed to 5,493. The State government has financed this programme for a sum of Rs. 10 crores, the Union government contributing only Rs. 1.74 crores for slum improvement and not clearance and the building of tenements. The second mass contact programme of the State Housing Board in early November covered the residents of Indira Nagar, Besant Nagar and Shastri Nagar. The discussions covered improved bus services, sewage connections to flats in Shastri Nagar and the Street lighting in the two other areas. A fourth meeting covered the residents of Nandanam, and Seethamma Colony and covered the same points plus rectification of electricity connection defects and finalisation of the cost of buildings and flats. These programmes are successful in bringing the people and the civil services together in a common aim to improve living conditions in the housing colonies.

Metropolitan Authority: The government introduced and had passed in the December 1973 session of the legislature

the Bill giving statutory basis for Madras Metropolitan Development Authority. (See Vol. II No. 10 page 7 and Vol. III page 90 of the Bulletin). The Bill entitled the Tamil Nadu Town and Country Planning (Amendment) Bill also provides guidelines for establishing planning areas in the State. Now the Development Authority should begin implementing the Rs. 900 crores multi faced programme for Madras and its surroundings over a 20 year period. The building of an underground rapid transit system is proposed in the draft Fifth Plan with a proposed provision of Rs. 100 crores (See Vol. III page 614). The more urgent programme is to disperse the growing concentration of people attracted by the Madras Harbour, the central station terminal and the industrial complexes around the city. The government is now launching the development of 3 satellite towns—Maraimalainagar, Tiruvellore and Gummidipundi at a cost of Rs. 5.60 crores to reduce the over-crowding of the city. The Metropolitan Development Authority plan is to limit the city population to 3 million and to develop the 3 satellite towns to accommodate 2.5 million people. This would meet the problem of the shortage of 3 lakh houses in the city and the problem of 40 per cent of its people living in slums. Also the city's infrastructure of water supply and drainage is on the point of breakdown. Maraimalainagar, 40 kms. from the city near Chingleput is the first satellite town to be developed at a cost of Rs. 160 lakhs, followed by Tiruvellore at Rs. 240 lakhs and Gummidipundi at Rs. 160 lakhs. The towns will be developed as self contained communities in employment, commerce and housing and will be closely linked with the city by two way corridors.

National :

Fifth Plan : The Fifth Plan presented to the National Development Council on December 8 and 9 has been developed on the basis of several factors which have intervened between the publication of the Approach Paper (See Vol. II No. 12, pages 8-10) in December 1972 and November 1973. First the various questions raised concerning the consistency model (See Vol. III pages 165-167 and 318-322) and the policy frame have had to be taken into account. Second the rise in prices and its effects on resources, targets, investment costs and savings have to be allowed for. Third the Fifth Plan base which is 1973-74 shows a shortfall in all sectors—against the Fourth Plan target of 129 million tonnes of foodgrains, be this year's achievement is likely to be 114-115 million tonnes (See last issue, Vol. III page 791), against the industrial growth target of 8-10 per cent, 1972 registered 7.8 per cent and the first quarter of 1973, 0.7 per cent (See Vol. III page 629) and lower level for this year, of industrial production. The overall growth rate for 1973-74, which is the Fifth Plan base, is computed at 3.7 per cent. Fourth the Sixth Finance Commission and Third Pay Commissions' awards (See last issue Vol. III pages 779-780, 782-783 have also had to be allowed for. Fifth the balance of payments gap has widened with increasing imports and international inflation. Allowing for all these factors the Fifth Plan starts with (a) perspective for 1974-75 to 1980-81 covering growth, poverty eradication, balance of payments and investments, (b) it proposes a policy frame concerning resource mobilisation, wages-incomes policy, a system of dual pricing for essential commodities, income distribution, land reforms, implementation, plan execution and monitoring. The policy frame is clear and the policy instruments well elaborated. In particular the clarification that in the interest of a surer attack against poverty and the structure of production that it calls for, the attainment of full self-reliance be planned for the end of the Sixth Plan, rather than at the end

of the Fifth Plan, is to be welcomed. The formulation of multiple policy instruments for multiple policy objectives—resource mobilisation, balance of payments including the new recognition of the role of commercial credits, private and public sector investment policy, income distribution, including wages and prices policy, is also to be welcomed. Here two issues have been passed over or lightly dealt with. There is no reference to decentralization and deconcentration of planning and execution except in regard to the reference to backward areas and regional disparities (para 7.21 of Chapter II). There is a brief reference to black money (para 7.19) but no policy adumbrated except the traditional bowing to the Wanchoo Committee. On employment policy, the rationale does not seem reflected in programmes outlined in Chapter XXI of Part II. (c) The Plan proposes an outlay of Rs. 53,411 crores which is 4.4 per cent higher than the Rs. 51,000 crores proposed in the approach paper computed at 1972-73 prices. Of the total outlay, the public sector outlay is Rs. 37,250 crores which is a 5.3 per cent increase over the Approach paper proposal and the private sector outlay Rs. 16,100 crores which is a 2.8 per cent increase. (d) The rate and pattern of growth (Chapter III) stands on weak grounds. First the Fourth Plan will register a compound growth rate of 3.7 per cent (para 3 of Chapter III). Against this record a 5.5 per cent growth rate is proposed. Second, this 5.5 per cent growth is on a very low achievement base of the base year 1973-74, so that the physical achievements in the Fifth Plan will be much lower than those proposed in the Approach Paper and even in this Draft. Third, the rise in development costs is computed at 4.4 per cent (para 8 of page 7 of Chapter III) at 1972-73 prices and has been neutralised by a similar higher provision for development outlays (Rs. 2,000 crores). At 1973-74 prices, however, the rise in investment costs is nearly double, at 8 per cent and will call for either further increase in the proposed outlay, which is impossible as 53,000 crores is way above our real resources prospects, or it will mean a further reduction in targets and achievements. This is not a plea for reducing the rate and pattern of growth envisaged, but rather to recognise these as imponderables representing hopes to be realised, if there is the will and the required discipline. The rate of growth for agriculture is 4.7 per cent, for industries 8-10 per cent and for exports 7.6 per cent over the 1973-74 achievements. (e) The domestic savings forecast in Chapter IV are on the high side and the taxation proposals hold out more hopes than is realisable as in regard to the lip service paid to the Agricultural Holdings tax. Both on this (para 17 of Chapter IV and Para 38 of Chapter V) and the revision of electricity rates proposed in para 46 of Chapter V, this State's efforts to tax the surplus agricultural incomes and decrease the State subsidy to the electricity rates paid by agriculturists should not be undermined as in the past (See Vol. II No. 8 pages 1 & 2 and No. 9 pages 1-3). (f) The Financial resources of the Plan outlined in Chapter VI and summarised in para 22 (increased from Rs. 6,215 crores to Rs. 6,850 crores), place a heavy burden on additional resource mobilisation both by the Union (Rs. 4,300 crores) and State (Rs. 2,550 crores) governments. How these resources will be raised is unclear except for the reference to higher rates of taxation. Deficit financing has been placed at a less unrealistic figure—a near three-fold increase over the Approach document figure of Rs. 850 crores, which can be sustained if the assumption of no deficit financing in the first two years holds true (para 2). But unless it is intended to hold the first year of the Fifth Plan to the same level as this year, some deficit financing will become unavoidable in the first year. (g) The balance of payments (Chapter VI)

gap after providing for a higher 7.6 per cent growth rate in exports and imports is increased from Rs. 3,000 crores to Rs. 4,008 crores. Against the 4,008 crores of gross aid, debt servicing will amount to Rs. 2,557 crores, leaving a net aid of Rs. 1,451 crores which is around 6 per cent of Fifth Plan Public sector investment. The total exports are estimated at Rs. 12,580 crores and imports at Rs. 14,100 crores. The major export targets are, jute Rs. 1,200 crores, tea Rs. 840 crores, textiles Rs. 1,000 crores, leather goods Rs. 840 crores, handicrafts Rs. 905 crores, coffee Rs. 190 crores and fish Rs. 580 crores. Two-thirds of the increase in export incomes of Rs. 890 crores is from iron ore, engineering goods, handicrafts, textiles, fish and leather goods. Imports are large, despite fiscal and regulatory devices proposed for restraining inessential and wasteful consumption and selective policy of import substitution. Even so there seems to be some under-estimation of the import content of the production stream proposed. Further the potential of handlooms for export growth is not recognised, the possibility of cutting out the Rs. 100 crores long staple cotton import for manufacture of luxury textiles for internal consumption not accepted (See Vol. III page 791) and the measures for saving on crude and petroleum use are not spelt out. (h) In the National programme of minimum needs (Chapter VII) which is to be welcomed as well as in other parts of the draft such as that on co-operatives (Chapter II of Part II paras 3.54 and para 3.57), there is a tendency to penalise States like Tamil Nadu which have raised resources, implemented past plans more adequately, and which have a potential for rapid growth—in primary education, in rural electrification, in industrialisation, irrigation or in co-operatives. The minimum needs programme covers education upto 14 years of age, minimum uniform availability of public health facilities, drinking water in scarcity areas, all weather roads to villages with a population of 1,500 persons, home sites for landless labour, slum improvement and 40 per cent coverage of rural areas by electrification—for a total outlay of Rs. 2,803.79 crores which in money terms is near the Approach document figures but a reduction in real terms. For Family Planning the outlay is Rs. 516 crores, for nutrition Rs. 400 crores, for water supply Rs. 1,022 crores, for urban development Rs. 543 crores and for Social Welfare Rs. 229 crores. (i) In admirable proposals on Plan implementation in Chapter IX of Part I, obviously drafted by the PEO recently set up in the Commission, there is a very good and elaborate treatment of the implementation problems and their improvement relating to the Union Ministries. The proposals should be adapted and applied to State conditions. (j) For industries and minerals an outlay of Rs. 13,529 crores is proposed to achieve an annual growth rate of 8.1 per cent. This outlay comprises Rs. 7,830 crores in the Union, Rs. 499 crores in the States and Rs. 5,200 crores in the private and co-operative sector. The Union outlay earmarks 62 per cent for the public sector and breaks it into Rs. 2,812 crores for the continuing and Rs. 4,218 crores for new projects. The pattern of investment and products emphasises the expansion and full capacity utilisation of the core sector, comprising steel, fertilisers, non-ferrous metals, minerals, coal, oil and machinery, mass production of essential goods for the poor masses such as cloth, edible oils, sugar, drugs, and bicycles, and restraint on luxury goods production. Mild steel production will be increased from the expected 5.4 million tonnes in 1973-74 to 9.4 million tonnes to meet the 10 million tonnes demand. This is rather a steep increase as there will be no new steel plants commissioned in the Fifth Plan beyond the expansion of Bhilai to 4 million tonnes and Bokaro to 4.75 million tonnes. Similarly the coal target

is 135 million tonnes, calling for the heavy investment and rationalised transport arrangements. The section on fuel and power is good with heavy reliance on coal and electricity and a cut back on oil. Crude production is to beat 12 million tonnes and the refineries throughout 36 million tonnes of crude in 1978-79. The objectives in this sector are to maximise output using existing capacity, speedy completion of spill-over projects, increasing capacity of existing units and creation of new capacity in accordance with plan priorities and advance action on projects which will go on stream in the Sixth Plan. The 1956 Industrial Policy Resolution and the February 1973 Industrial Licensing Policy (See Vol. III page 240) which delimit the functioning of larger industrial houses and foreign companies will guide the industrial programme. One major pre-requisite for this sector is industrial peace and labour discipline without which none of the targets will be achieved. (k) Substantial expansion in the private sector is proposed in cement sugar, paper, textiles, chemicals, drugs, glass and rubber goods. The production target for textiles is 5,200 million metres, with an export target of 1,350 million metres. The National Textile Corporation which will manage 100 textile mills will direct the production of standard cloth and the supply of yarn to the decentralized sector. (l) The farm sector starting with a 114 million tonnes food-grains base and a growth target of 4.7 percent has a higher outlay at Rs. 4,730 cores than what was provided in the Approach Paper to compensate for the rise in prices. Rs. 2,681 crores is provided for irrigation, Rs. 6,190 crores for power and Rs. 7,115 crores for transport and communications. (m) The Health proposals in chapter XIX, particularly the nutrition programme are soundly conceived. The major lacuna both in this Chapter and in the health section of the minimum needs programme (Chapter VIII Part I) is that there seems to be no plan to use our vast army of indigenous and homoeopathic medical practitioners. There is only one brief reference to them under the medical education and research (paras 4.34 and 4.35 of Chapter XIX). This should be rectified, if our health targets are to be achieved in the Fifth Plan. (n) The programme of Urban Development and Housing is set forth in Chapter XX. The fiscal and legislative measures proposed in paras 3.4 and 3.5 could be simplified if the objective of socialisation of such land is accepted. In the programme of minimum needs (Chapter VIII of Part I) and in this Chapter, there is no recognition of the programme of slum clearance, only of slum improvements. In the Housing sector proposed (para 4.1), there can be a reduction in the Rs. 100 crores for office and residential accommodation for Central Government employees and a transfer of that saving to finance the rural house sites of landless workers in the State sector.

The projected sectoral growth rates for the Fifth Plan period are:

Sectors 1.	Average annual rate of growth (%) Value of output 2.	 Value added 3.
1. Agriculture	4.67	3.89
2. Mining and manufacturing	8.27	8.11
(a) Mining	10.47	9.86
(b) Manufacturing	8.21	7.98
(i) food products	5.12	4.78
(ii) textiles	5.12	4.10
(iii) wood and paper products	6.90	4.93
(iv) leather and rubber products	7.65	7.32
(v) chemical products	12.43	12.35
(vi) coal and petroleum products	10.61	6.87
(vii) non-metallic mineral products	8.70	8.20
(viii) basic metals	12.58	11.76
(ix) metal products	8.86	8.64
(x) non-electrical engineering products	13.58	13.56
(xi) electrical engineering products	9.49	8.91
(xii) transport equipment	7.24	7.24
(xiii) instruments	9.28	8.20
(xiv) miscellaneous industries	8.60	8.41
3. Electricity	10.84	9.87
4. Construction	8.77	8.70
5. Transport	6.13	5.63
6. Services	6.27	5.65
	Total	5.50

THE INVESTMENT PUBLIC AND PRIVATE SECTORS ARE:

(Rs. Crores)

Head of Development (1)	*Public Sector Total Outlay* (2)	*Private Sector Investment* (3)	*Total Outlay* (4)	*% Distribution of Total Outlay* (5)
1. Agriculture	4,730	2,950	7,680	14.38
2. Irrigation	2,681	—	2,681	5.02
3. Power	6,190	100	6,290	11.78
4. Mining & Manufacturing	8,939	6,250	15,189	28.42
5. Construction	25	75	100	0.19
6. Transport & Communications	7,115	1,870	8,985	16.82
7. Trade and Storage	205	1,150	1,355	2.54
8. Housing and Sites	600	3,636	4,236	7.93
9. Banking and Insurance	90	10	100	0.19
10. Public Administration & Defence	98	—	98	0.18
11. *Other Services*	*6,209*	*120*	*6,329*	*11.95*
(i) Education and training	1,726	100	1,826	3.46
(ii) Scientific Research	419	—	419	0.78
(iii) Health	796	20	816	1.53
(iv) Family Planning	516	—	516	0.97
(v) Nutrition	400	—	400	0.75
(vi) Urban Development	543	—	543	1.03
(vii) Water Supply	1,022	—	1,022	1.95
(viii) Social Welfare	229	—	229	0.43
(ix) Welfare of Backward Classes	226	—	226	0.43
(x) Labour Welfare	57	—	57	0.10
(xi) Miscellaneous	275	—	275	0.52
12. Hill and Tribal Areas	500	—	500	0.95
13. Projected reduction in provision for Science and Technology or alternatively additional resources to be found	-132	—	-132	-0.25
Total	37,250	18,161	53,411	100,00

The Distribution of Public Sector Outlays as between Union, States and Territories is:

Distribution of Public Sector Outlays Centre. State and Union Territories

(Rs. Crores)

Heads of Develapment	*Centre*	*States*	*Union Territories*	*Total*
1. Agriculture	1,946	2,717	67	4,730
2. Irrigation	140	2,515	26	2,681
3. Power	738	5,343	109	6,190
4. Mining and Manufacturing	8,180	742	17	8,939
5. Construction	25	—	—	25
6. Transport and Communication	5,727	1,297	91	7,115
7. Trade and Storage	194	11	—	205
8. Housing and Real Estate	237	338	25	600
9. Banking and Insurance	90	—	—	90
10. Public Administration and Defence	60	30	8	98
11. *Other Services*	*2,372*	*3,580*	*257*	*6,209*
(i) Education and Training	484	1,155	87	1,726
(ii) Scientific Research	419	—	—	419
(iii) Health	253	517	26	796
(iv) Family Planning	516	—	—	516
(v) Nutrition	70	330	—	400
(vi) Urban Development	252	272	19	543
(vii) Water Supply	16	924	82	1,022
(viii) Social Welfare	200	26	3	229
(ix) Welfare of Backward Classes	55	167	4	226
(x) Labour Welfare	15	38	4	57
(xi) Miscellaneous	92	151	32	275
12. Hill and Tribal Areas	—	500	—	500
13. Less projected reduction in provision for Science & Technology or alternatively additional resources to be found	-132	—	—	-132
Total	19,577	17,073	600	37,250

The National Development Council endorsed the strategy and objectives of the Draft Plan together with the proposed rate of growth and size of the Plan. It also received an assurance from the Prime Minister, the Chairman of the Council, that the proposed increases in Union outlays in sectors like agriculture, education and health which are the responsibility of the States will be reviewed in light of the critical comments made by the members of the Council. It recognised that the proposed resource mobilisation, production, investment and savings targets called for financial and administrative discipline for their realisation. In the resolution on the draft plan that it adopted, it called attention to the need for a determined national effort to achieve the production targets and appealed to all sections in the Country to co-operate in the effort. It recognised the hard effort called for the resource mobilisation which involves Rs. 4,300 crores for the Union and Rs. 2,550 crores for the State governments at 1972-73 prices. For the States in particular it calls for a two and half times revenue raising campaign compared to the Fourth Plan when Rs. 1,058 crores would have been raised. It noted that the agricultural sector is contributing less than 1 per cent of the net domestic product in direct taxes which has remained stationary at around Rs. 130 crores per annum during the years 1967-72 and agriculture's share in total tax revenues has declined from 12 per cent to 6.8 per cent between 1967-68 to 1971-72. Again with a total investment of Rs. 5,000 crores in power, the return on the Electricity Boards inclusive of electricity duty is less than 5 per cent. A further investment of Rs. 6,200 crores is proposed in the Fifth Plan. The water rates too are low and being subsidised. The Council noted the call of the Union Finance Ministry to raise water and electricity rates and introduce either the Agricultural Holdings tax along lines of the Raj Committee report (See Vol. III pages 14-15) or by increasing land revenues and cesses and charges on them. The Union government plans to raise additional resources through revision of railway, P & T and other public undertaking rates, widening the base of central income and wealth tax, reducing food subsidies, increasing urban property tax, and increasing commodity taxes for curbing inessential consumption. When the Union government's decision on the Sixth Finance Commission's report is made known and the final computations on the basis of 1973-74 prices are made in February, and the revisions introduced in the sectoral programmes as agreed at the Council, the Plan will be finalised.

Prices and Price damping: The moderation of the price rise in September 1973 noted in the last issue, namely Vol III page 781, continued in October 1973. The official wholesale price index for the week ending November 3, registered a decline of 0.4 per cent as against the previous week, which itself registered a decline of 0.2 per cent. The index for food articles declined slightly, with falls—in groundnut oil 14 per cent, milk 8 per cent, gingelly oil 6 per cent, while pulses rose by 14 per cent, chillies by 7 per cent. The fuel and power index fell by 0.2 per cent, chemicals remained stationary and manufactured and finished products rose slightly. In mid November the Union government reduced the vanaspati prices by 20 paise per kilo. The dual pricing of steel has ended the steel black-market. An important decision at the end of November on price trends and regulation was that of the Supreme Court which ruled that the government can fix prices so that the industry producing a commodity or the trade dealing in the commodity may face alleged loss for some time. This will be referred to later in connection with yarn control. The cumulative price rise led to the Union government announcing a third rise in D.A. of 3

per cent as from October 1 for its staff. It also admitted in the Rajya Sabha that in November 1973 the Rupee was worth only 36 paise compared to the 1949 consumer price index. In the effort to tighten credit, the RBI increased from mid November 1973 the minimum lending rate for bank advances against sugar, vegetable oils, seeds, cotton, textile yarn and fabrics from 12 to 13 per cent. From November 30, the rate on all advances except the exempted list was raised from 10 to 11 per cent. The margin on bank advances on export credit was also tightened and the list of borrowers exempted from these controls pruned. Borrowing of scheduled banks from the RBI was also limited from 1-2 per cent of deposits. The liquidity requirements were raised from 30 to 32 per cent from December 8, the previous ratio of 39 being raised to 40. The aim is to induce a faster turn over of the available credit during the busy season of the production and marketing of crops and to limit credit expansion in the non-food sector during the seven month period September 1973–April 1974 to 10 per cent of the September 1973 advances. This means that in addition to the Rs. 6,000 crores for food procurement, Rs. 650 crores more will be available for such purposes. There is the problem of the relation between the higher lending rates and stationary deposit rate, which will simply lead to a rise in the profits of the banks. With these measures, however the RBI can help ensure that the banking system will contribute to the price damping process, if it can also influence the spread of credit to the priority sectors and its diversification.

National Production Front :

Industrial Growth : The level of industrial production for May 1973 as reported by the Union government showed a decline of 1.4 per cent compared to May 1972. The Union ministry of industrial development in its mid November 1973 review traces the current industrial stagnation and rise in prices to the earlier plan holiday and does not expect a recovery during the current year. For the first five months of 1973 industrial growth has been 0.3 per cent compared to the same period of the previous year. The investments made in 1973 show declining licenses from 563 last year to 294 between January and August this year. The major industrial declines are in pulp and paper machinery. aluminium conductors, semi finished steel LT insulations, radios, typewriters, soap etc. A less sharp decline occurred in sugar mill machinery, electrical steel sheets, aluminium ingots, paper and paper boards, calcium carbide, jute manufactures, cement, soda ash, caustic soda, nitrogenous fertilisers, newsprint, tubes and tyres and leather footwear. In others like textiles, production was static. The reasons for the low investment are in turn traced to power shortage and short supply of raw materials. The bright side in this rather gloomy picture is that the Heavy industry ministry reports increased production in its public sector units during the first six months of the current year 1973–74, due to the computerised monitoring system set up and guidance from the Ministry. The units target for 1973–74 is Rs. 429 crores, being a 51 per cent increase over last year's and by September 1973 production totalled Rs. 146 crores compared to Rs. 88 crores in the first six months of 1972–73. Bharat Heavy electricals' performance was the best being Rs. 79.6 crores against the 6 months target of Rs. 86.66 crores (94 per cent), followed by Boiler Plant, Tiruchy which surpassed its target (Rs. 25.92 crores against 24.66 crores with 163 per cent capacity utilisation) and Heavy Power Equipment and Switchgear Plant, Hyderabad. Heavy Electrical Equipment, Hardwar, registered Rs. 13.49 crores against the target of 15.53 crores, Foundry and Forge, Heavy

Machine Building, Heavy Machine Tools, Bharat Heavy Plates, MAMC, Tungabhadra Steel, and Hindustan Machine Tools all have performed well. Heavy Electricals, Bhopal and Jessops have also surpassed their targets. The Heavy Engineering Corporation and the Railway Wagon units are lagging and special programmes of cost accounting and management reorganisation are being undertaken to review their cost and price structures and give their production a much needed boost. This positive picture of the Heavy industry units does not however compensate for the general industrial slack that the industry faces. At the Central Advisory Council meeting in November 1973 in Delhi, FICCI decided to set up six Committees on fertilisers, cement, textiles, tyres and tubes, machinery and aluminium to step up production in these key sectors and evolve a distribution system to ensure that industrial products are made available to consumers at fair prices. It is hoped that FICCI can ensure the co-operation and joint functioning of at least the important private sector units to help in reviving the stagnant industrial scene.

Steel: November 1973 witnessed some set back in steel production. The 10 day strike in Bokaro resulted in a daily loss of Rs. 10 lakhs amounting to a cumulative Rs. 1 crore. IISCO reported heavy pilferage of its material. Durgapur had to cut back on its production because of cuts in power supply, coal and coke availabilities. The plant needs 45 MW but has had only 15 MW from its generator and 18 MW to 24 MW from the Damodar Valley Corporation between April and November 1973. The loss in production that resulted in the period April to September was 45,000 tonnes of saleable steel. Despite reducing its ingot target from 1 million tonnes to 9 lakh tonnes and saleable steel target from 7.7 lakh tonnes to 5 lakh tonnes for the year, during April-October its ingot production was only 4.75 lakh tonnes and saleable steel 2 lakh tonnes, with little hope of its attaining its reduced target, Its coal availability is equally parlous, being around one third of its monthly need of 1.7 lakh tonnes. The coke ovens are also in bad shape. Of the 4 coke oven batteries, two have broken down, and their production has fallen by 50 per cent. The nascent labour union rivalries have not been settled, despite the appointment of the trade union leader as manager. The result of the coal and power shortage has been a decline in production for the period April-September by 1.77 lakh tonnes in TISCO, 54,297 tonnes in Rourkela, 44,736 tonnes in Durgapur 27,500 tonnes in Bhilai and 20,700 tonnes in IISCO. For the future, the construction programme at Bokaro is proceeding on schedule so that by the end of the Fifth Plan, it would produce 4.75 million tonnes of steel ingots. The future expansions are aimed at a further 4, 5.5 and 10 million tonnes capacity in accordance with the November agreement signed with the Soviet Union. At Rourkela a cold rolled steel unit is being set up to meet the demand for special steels. Also the government is devoting special attention to sponge iron processes to produce immediate results and is encouraging the setting up of arc furnaces as they would help in recycling waste material. On the other hand, in view of the limited demand for their products and the shortage in their raw material supplies, from early November 1973, the delicensed sector of ferrous scrap based electric arc furnaces, steel re-rolling units and steel wire drawing units is being frozen, contrary to the mini-steel policy referred to in Vol. III page 630. The capacity of the ferrous scrap based electric arc furnaces is now 1.6 million tonnes plus another 1 million tonnes of liquid steel capacity by the end of 1974. The indigenous availability of ferrous scrap is only 2 million tonnes and

importing the balance will be a costly undertaking. In steel re-rolling the existing capacity is far in excess of availability. The demand for wire drawing units will not exceed 0.8 million tonnes by 1980. In order to regulate the rational growth of mini steel plants in line with the availability of inputs and demand for their products, the policy of freezing further expansions and diversifying the existing processes of the plants is a sound one. As noted earlier the dual steel price policy analysed in the last issue (Vol. III page 785) is functioning satisfactorily, not only in bringing prices out into the open but also allowing the majority of user industries to obtain their steel at fixed prices, which are low compared with the national prices (See Vol. III page 630).

Crude : The Crude position in November continued to cause anxiety. Saudi Arabia officially notified the government that the supplies to India will not be reduced both on the government supply and in the supply through Esso. As a consequence Esso which had notified the government of a 25 per cent cut in crude imports (See last issue, Vol. III page 786) has informed them that from December there will be no cut and the reduction in September and October will be made good. Similarly Caltex has informed the government that there will be no reduction in its crude imports and Burmah Shell has informed the government that any reduction in the overall availability will be on a strict pro-rata basis. The availability of crude, therefore, is not the major problem. The problem facing the Country is the rise in the price of crude by 300 per cent from $1.28 per barrel in 1970 to $3.86 a barrel today. The foreign exchange costs which were Rs. 102.30 crores in 1970, Rs. 139.88 crores in 1971, Rs. 144.25 crores in 1972 and which before the price rise was expected to be Rs. 200 crores will jump to Rs. 500 crores, unless there is a cut in the consumption of petroleum products. As of mid November 1974, the increased foreign exchange paid on crude exports was Rs. 20 crores. Hence a cut in petroleum products consumption is essential as otherwise at the present rate of consumption which will increase from 2.5 million to 7 million tonnes by 1977 the foreign exchange costs would be Rs. 1,500 crores. Second from being an exporter of naphtha which is a fertiliser feedstock and so has higher priority than petroleum, the Country is this year short of naphtha by 4 lakh tonnes and will be short by 8 lakh tonnes next year. As petrol and naphtha are alternative products, by cutting down petrol consumption, the availability of naphtha will be increased. The output of naphtha is roughly 8 per cent of the total through-put of 20 million tonnes; if petroleum is cut from 8 per cent to 6 per cent, naphtha supplies can be increased by 4 lakh tonnes for feedstock to 2 of our large fertilizer plants. The first effect of the price hike in petrol was to reduce consumption by around 40 per cent in this State and other Southern States. The real reduction will not be known till early in 1974. Meanwhile the petrol consumption by the State and public sector vehicles must also be reduced. The Union government has asked all States to prepare for a quick introduction of petrol rationing to ensure further reduction in consumption. A further immediate effect has been an increase in transport costs, a further deficit in the railway budget which has slowed down its dieselisation and high value freight programme, and also brought on, as noted earlier, a strike for 10 days by petrol dealers. In addition to lowering the price of kerosene and HSD as reported in the last issue (Vol. III pages 787-788), the government has increased the petrol dealers' commission on petrol from 4.2 paise to 5 paise and on HSD from 1.8 paise to 4.1 paise, with an undertaking that the Bureau of Industrial costs would

make a cost study of the profitability of petroleum dealers for a further decision on this matter. At the same time to help the less affluent section, some marginal relief has been given to scooter and motor cycle owners by reducing their registration fees and excise duty on tyres. Even before rationing is introduced, racketeering has begun. In Bihar, the CBI is investigating the involvement of 2 ministers and some senior officials in the purchase of 10,000 sub-standard 5 H.P. diesel pumps at a cost of Rs. 2.75 crores out of the Rs. 37 crores allocated to that State for the emergency rabi programme. Here is a part answer to the question raised as to what happened to the Rs. 200 crores spent on this programme (Vol. III page 404). There will be need for the greatest vigilance when petroleum consumption limitations which are inevitable are introduced. Against this backdrop, the Union government is planning at long last, to set up a National Energy Board to integrate the work of various ministries concerned with energy as recommended by the Fuel Policy Committee. That policy must be based on coal—the only fuel that is abundantly available. Also the maximum exploitation of the Country's crude supplies should be ensured. The Oil and Natural Gas Commission has now reached an annual production rate of 4.11 million tonnes of crude and 455 million cubic metres of natural gas. Of 107 structures tested by drilling, 31 have yielded oil or gas. Of these 31, 6 have been developed into oil fields (4 in Gujarat and 2 in Assam) and the other 10 in Gujarat and one in Assam put on trial production. Starting in September 1961 with 100 tonnes oil per day, it has so far produced 28.6 million tonnes of crude and 2,478 cubic metres gas. For the Fifth Plan, the Commission's programme is Rs. 597 crores, which will be financed from its own revenues, producing 4 million more tonnes of crude. In addition it has an offshore exploration, in Iran from which it gets 0.75 million tonnes of Rostrum crude earning Rs. 23 crores per annum. It is also exploring for oil in Iran and is negotiating for one in Algeria. The offshore drilling in Bombay high is encouraging, already at 1/3 of the depth. By February the drilling of 4,500 metres should be completed and the size of this reserve will then be known. The Soviet Union has offered the supply of 3 million tonnes of crude and 1.5 million tonnes of kerosene next year and 21 deep drilling rigs for the oil programme of the Country. The French government has also offered its co-operation in our offshore prospecting through its 2 State controlled petroleum companies. The Union government has also decided to offer ESSO Rs. 17 crores to acquire 75 per cent of the company's holding, which is an economic way of meeting the Fifth Plan needs for 14 million tonnes of additional refinery capacity. Expanding the Trombay Esso unit and its attached Lube India would cost the government one third of what it would cost in setting up a new refinery.

Fertilisers: The current shortage of fertilisers in relation to demand is around 30 per cent. In this situation the current use of 67.5 per cent of capacity for nitrogenous fertilisers, 62.3 per cent for complex fertilisers and 50 per cent for phosphatic fertilisers is inexcusable. Before planning to expand our capacity or alongside of it, the first requirement is to ensure full production upto capacity. Instead of producing 16.5 lakh tonnes, we will be producing 11 lakh tonnes and importing 10.4 lakh tonnes. Next year's prospects are grim because the world production of naphtha is in short supply, and 85 per cent of its total is consumed by affluent countries. We do not have long term contracts and two of our suppliers have just failed to deliver. It is urgent therefore that we produce upto capacity.

complete the construction of the Goa, Cochin and Durgapur refineries on schedule which will increase our capacity by 53 lakh tonnes and act expeditiously on the 3 Japan aided units and the 2 built with Italian and French aid. The five projects are to be set up in Bhatinda in Punjab, Karnal in Haryana, Mathura in U.P., Cochin in Kerala and Paradeep in Orissa. It is essential that the commissioning and construction schedules for these five plants should learn from the causes of the delays in the building of the existing 3 plants, so that the gap between availability and demand is reduced.

Coal: Coal production during the current year is estimated at 72 million tonnes with a target of 80 million tonnes for next year according to the Chairman of the Coal Mines Authority speaking at the November 26 Seminar of the FICCI at Calcutta and at 80 million tonnes for this year by the Minister of Steel and Mines speaking at the Rajya Sabha on November 13. There seems to be some need for co-ordination between the 2 estimates of the current year's coal production. Actually the 1972-73 coal output was 76 million tonnes and if the power supply to the mines and some mechanisation of operations are assured then the increased production of the West Bengal and Bihar mines at 72,000 tonnes per day could be raised to 80,000 tonnes per day and the current year's target of 80 million tonnes can be attained. But there is a persisting coal shortage. Soft coal prices in Calcutta are Rs. 175 per tonne against the pit-head cost of Rs. 65 per tonne. Hard coke prices in Punjab have jumped from Rs. 220 per tonne to Rs. 600 per tonne. This scarcity situation is not primarily a production and supply problem. In 1972-73 the demand was estimated at 80 million tonnes and the shortage in the 3 previous years was a mere 4 million tonnes and for this year a probable 5 million tonnes, if 80 million tonnes are produced, which does not account for the 250-300 per cent jump in prices. In the previous 3 years, the gap between supply and demand was never above 3 million tonnes. This means that the scarcity is primarily a distribution problem. Railways consume 30 per cent of the total production followed by power (20 per cent), iron and steel (17 per cent), cement (3 per cent) and glass, refractories, textiles and foundries. There is a suspicion that a part of the increased production reported after the non-coking coal mines nationalisation (See Vol. III page 173) was in effect accounting for about 5 million tonnes which the previous private colliery owners did not report on in order to avoid payment of various duties. Also the use of some 7 million tonnes of coking coal for non-metallurgical purposes, which is exactly the supply shortfall faced by the metallurgical industries must be taken into account. There are also complaints about the poor quality of coal which have damaged some of the generator boilers. Even so, the coal supply position does not account for the serious shortages faced by the steel, thermal, cement and other industries. The answer must be sought in the poor distribution network. The problem of distribution arises from the fact that 70 per cent of the Country's coal mines and 60 per cent of the reserves are located in the North Eastern States of Bihar and West Bengal and it requires 10,000 wagons per day to transport the coal to the coal based user industries. The average number of coal wagons loaded from the two States average now a little more than half of that required number. The unseemly wrangle between the coal and railway authorities about wagons continues. The quarrel is that the coal authority demands 6,000 wagons per day and the railways point out that against the daily 5,500 wagons made available, the mines in the two States

have been able to load only 5,250 wagons. The result is the user industries are starved and the pit-head accumulation of coal stocks has reached uneconomic levels. A normal pit-head stocking of one month's production of 6 million tonnes should be allowed for. Now 9 million tonnes valued at Rs. 30 crores are so stocked, involving an interest payment by the industry of Rs. 25 lakhs per month. The immediate measures that need to be taken are to increase the wagon availability and speed their turn around, restrict the non-metallurgic use of coking coal and continue with increasing the lifting of coal from the mines, given the oil crisis that we face in the Country. The value and importance of coal represent a very high stake for the economy and it is hoped that the high level standing committee headed by the Deputy Minister for Steel and Mines will in light of this analysis establish clear guidelines and a programme of action for dealing with the problems of transportation and distribution. For the Fifth Plan, the production target of 135 million tonnes to meet an estimated demand of 160 million tonnes by the last year of the Plan, involves a virtual doubling of the current production level and calls for an investment of Rs. 900 crores rather than the Rs. 737 crores that has been estimated (the rise being due to the higher costs of excavation at greater depths). The industry can finance Rs. 200 crores of this amount and the rest will have to be provided by long term lending institutions. Given the irreversibility of the issues involved in the coal supply and distribution area, the Fifth Plan imperatives must be met fully.

Jute Manufactures : With the increasing internal demand for sacking and hessian for the large food crop and sugar and the growing external demand for gunnies because of the rising prices of substituted fibres (reflecting the rise in the oil prices), production of jute goods is increasing. In October 1973 the mills were asked by the Commissioner to produce 17,000 tonnes of carpet backing and 27,000 tonnes of hessian and in November they were asked to produce a minimum of 20,000 tonnes of carpet backing and 30,000 tonnes of hessian cloth. In turn, in order to steady raw jute prices, the mills were asked to buy for each of the two months 12.5 lakh bales of raw jute. With all these measures, the supply of jute goods did not meet the total internal and external demand and there was a trend of price rises. The effect of the abolition of the export duty on sacking and the reduction of that on hessian in August (See Vol III page 634) has been positive. Now the increased profitability of the industries should be used to promote its renewal and modernisation programmes.

Textiles : The two houses of parliament passed the Textiles Committee (Amendment) Bill 1973 under which an excise cess of up to 1 per cent ad valorem will be levied on all textiles and textile machinery manufactured in the Country. This cess will not be passed on to consumers and will be used to help in the increased production of standard cloth which is to be limited to a few varieties which will be durable and easily washable. Cotton and textile prices for the Country are under examination by a high power committee. In the meanwhile to regulate prices, every metre of cloth produced by the mills is to have its price stamped. There is also the question of distribution, which is part of the distribution machinery for essential goods. For the Fifth Plan, the Planning Commission's task force has recommended the allocation of Rs.800 crores for expansion and Rs.450 crores for modernisation of the cotton textile industry on the basis of 10,040 million metres of cotton cloth and 1,259 million kg of cotton yarn for that

period. The expansion of spinning capacity is to reach 23.23 million spindles by 1978-79, being an increase of 5.03 million spindles over 1972-73. The modernisation programme involves replacing 81.8 million spindless in weak and marginal mills, 1.8 million spindles in intermediate mills and 9 *lakh* spindles in the better off mills. The cloth production consists of 4,100 million metres from mills and 4,590 million metres from handlooms for domestic consumption and 1,300 million metres and 50 million metres respectively for export. This means that the mills will need 675 million kgs of yarn, handlooms 675 million kgs and hosiery, rope-making etc 75 million kgs and exports 45 million kgs. The mills part of this programme can to a very large extent be financed by the industry.

Silk : The Central Silk Board meeting in Ranchi in November 1973 decided to set up a central tasar research development corporation at Jamshedpur with a capital of Rs. 50 lakhs to ensure fair prices to primary producers, prevent their exploitation by middlemen and ensure a steady supply of cocoon and tasar yarn to handloom weavers and export manufactures. Also a central raw silk corporation with an authorised capital of Rs. 2 crores is being set up at Bangalore with the participation of Union and State governments and producers and exporters to enforce floor and ceiling prices as fixed by the Board. This should help to reduce shortage referred to in the last issue, (Vol. III pages 646-647 and 804). For the Fifth Plan, a production target of 46.5 lakh kg and an export target of Rs. 87.5 crores, against the Fourth Plan targets of 26.6 lakh kgs and Rs. 59 crores respectively have been fixed. This will call for a plan outlay of Rs. 41.2 crores, including Rs. 8 crores for sericulture research, seeds and quality control.

Newsprint: The newsprint crisis analysed in the last three issues of 1973, (Vol. III pages 632, 706 and 789 last issue) continued unabated in November. Priority for unloading was given to 3 ships carrying 6,000 tonnes, 1,200 tonnes and 1,100 tonnes respectively at the end of November 1973. The price of indigenous newsprint has been raised to attract new investment. 3 newsprint plants with 1,80,000 tonnes capacity have been cleared and 68 letters of intent for 1 million tonnes capacity issued. But all this does not help the current crisis. And so the Indian and Eastern Newspaper Society and the Indian Society of Advertisers have proposed with government approval that given the world shortage in newsprint, the affluent countries should reduce their newsprint consumption by one per cent, so that India and the developing countries can meet their minimal needs. An appeal has been addressed to UNESCO and UN to this effect. Meanwhile nearer home, the Union government has called attention to the slackness in the industry. In the field of printing machinery, only Rs. 1 crore worth of machines per year are being produced against a licensed capacity of Rs. 7 crores. In addition Rs. 27 crores of licenses have been issued with no result. Now the government should withdraw and cancel these unused licenses, stop imports of machinery and issue new licenses to those who are serious. One breakthrough in newsprint production within the Country is the use of Kenaf which one mill, Hudson Pulp and Paper, has used to produce newsprint and paper. It is a good substitute for wood pulp and grows widely all over the Country. The cost of cultivation of Kenaf is Rs. 150 per hectare and its return would be Rs. 2,000 per hectare, producing 4,000 tonnes of newsprint per day. Some US firms are in the market to buy our Kenaf for newsprint. It is important that agreements should be made with them to supply

the domestic market with newsprint. Indian mills also should be set up, possibly in the public sector as the capital outlay for a newsprint plant producing 4,000 tonnes of paper per day will be Rs. 750 crores.

Radios: Radio manufacture in the small scale sector is doing well and will achieve its production target in 1975. Out of 64 television units licensed for sale, 10 are already in production. Between 1951-71 the number of radio sets in use increased 18 times to 13 millions due to rapid growth of production of cheap transistor sets. Current production is around 3 million sets a year. The industry's growth has generated additional 350 radio engineers jobs, 150 jobs for assembling workers and 400 for radio technicians. By next year the television manufactures will require 600 television mechanics. This small scale sector is rapidly expanding.

Agricultural Production: The 1972-73 foodgrains estimated at 100 million tonnes in Vol. III pages 19, 177, 237, 238 & 332 has turned out to be an overestimate. The Union government in November 1973 announced that last year's production was 95.20 million tonnes against the revised estimate of 105 million tonnes for 1971-72, a fall of 9 5 per cent. Kharif production totalled 57.22 million tonnes and the rabi programme despite the crash Rs. 200 crores spent (Vol. II No. 12 page 17 and Vol. III page 19) on the rabi crop. Despite all reports in the previous issues to the contrary, the fall in production of various crops ranged from 5.6 per cent in wheat to 28 6 per cent in bajra and kharif pulses. There is need for a thorough enquiry into the crash rabi programme to guide our future actions. Was there really an extension in acreage as planned in justification of this huge investment from 19 million hectares to 23 million hectares for wheat, summer rice from 2 to 3 million hectares and rabi jawar by 5 lakh additional hectares? If there was, how is the sharp fall in output to be explained—the fall in rabi production being from 42.18 million tonnes in 1971-72 when there was no crash Rs. 200 crores programme to 37.97 million tonnes in 1972-73 when there was one. Against this rather sorry picture when every one—the Union governments' Economic Review the Reserve Bank's annual review, the NCEAR review and this Institute's review—was misled about the 1972-73 performance into estimating it at 100 million tonnes production, the official estimates in November 1973 of increasing kharif production of foodgrains, jute and cotton, kharif oil seeds must be accepted with some caution. Despite these optimistic reports, prices of food-grains continued in November to be high and the market is usually a good barometer of what is actually happening on the production front. Kharif procurement has been going well. By November 25, 1974, against the procurement target for the season of 6.55 million tonnes, 8.3 lakh tonnes had been procured compared to 3.35 lakh tonnes in the corresponding period last year. Rice procurement by FCI in Punjab, Haryana, U.P., Tamil Nadu was 7.2 lakh tonnes and in addition there is the 8 lakh tonnes of captive procurement as levy from the mills. For these five States thus in the seven weeks of the paddy arriving in the markets, 1.5 million tonnes out of their 2 million tonnes target had been achieved. Of the 1.65 million coarse grains procurement target, 1 1 lakh tonnes had been achieved by that date. The major contributors were Punjab 3.8 lakh tonnes of rice, 50,000 tonnes of coarse grains, Haryana 1 lakh tonnes of rice and Tamil Nadu 90,000 tonnes of rice, which by the month end, increased to 1.1 lakh tonnes. Rajasthan is imposing a 50 per cent kharif food-grains levy on trade, banning inter-zone movement. In the remaining two months of the season, the market arrivals are expected to be large due to increased production and the

higher procurement prices (See the last issue Vol. III) pages 716 and 799. To meet the increased procurement, FCI has arranged for improved storage of paddy and conversion into rice. Most of the 25 modern rice mills are now at work milling the procured paddy the Sembanark oil rice bran solvent extraction plant and three others like it are being commissioned, and the maize milling plant at Faridabad will be producing maize, atta, suji and grits. The storage plans include the Rs. 9 crore 10 silos with a capacity of 20,000 tonnes each and concrete silos with 2.7 lakh tonnes capacity. A dhall mill in Lucknow will soon start operation. Plans for the rabi season are now being finalised. Farmers have been advised to use the new dwarf varieties of wheat even under low fertilisers conditions. Maharashtra is bringing 55 lakh hectares under rabi cultivation against the normal 48 lakh hectares, Punjab Haryana and U.P. have similarly set expanded rabi hectarage targets. The government has raised the issue prices of wheat from November 8, 1973 for Mexican variety from Rs. 78 to Rs. 90 a quintal and for the superior variety from Rs. 84 to Rs. 96 to reduce the financial subsidy burden on the budget. With regard to the future, the Director General of ICAR in his Patel Memorial Lectures strikes an optimistic note with our assets of a large volume of tapped and untapped sources of water, abundant sunlight, and a large animal and human population. The achievements in wheat now should be extended to rice, pulses and coarse grains. In another development, the expert committee on crop insurance has recommended against any such scheme on a long term or even pilot basis. Studies conducted by the Tamil Nadu Agricultural University have led to the same conclusion. Any such scheme will divert scarce resources from more promising measures to raise agricultural productivity and reduce the variability of yields. Whatever resources we have should be used to prevent the risks and not compensate risks. The purpose of the scheme would be better served, as the committee points out, at lower cost, by farmers saving regularly in good years and being extended credit on liberal terms in lean years. For the Country today, crop insurance is not an agricultural priority.

Exports : Probably the most important development in the Country's trade front is the sectoral agreement signed between India and ECM on November 6, 1973 under which the common market 16 to 22 per cent tariff on certain type of jute products is cut by 40 per cent from 1 January, 1974 and by 60 per cent from 1 January, 1975. For jute cloth and jute bags there are to be no quotas, while there is to be an increase in carpet backing quotas upto 8,000 tonnes in 1974, with an annual 10 per cent increase thereafter. Similar reductions in coir products have been included in the agreement. Equally important is Britain's application to the ECM to permit zero duty on Indian jute and coir products after January 1, 1974 and a similar arrangement with Denmark. The commercial co-operation agreement between ECM and India (See Vol. III pages 793-791) also looks as if it will be signed soon. Against this hopeful background of future prospects, the provisional figures released in November 1973 show that India's exports were Rs. 659.9 crores for the first 4 months—April-July 1973, involving a 10 per cent increase over the same 4 months of 1972. But imports also increased during this period from Rs. 551.1 crores in April-July 1972 to Rs. 733.2 crores due to the import of essential raw materials. The Country's exports to ECAFE countries rose fast in 1972-73 to Rs. 555.4 crores compared to Rs. 422.8 crores in the previous year, with Japan being the leading customer

at Rs. 216.8 crores. To East Europe the export was Rs. 469.5 crores, to U.S. Rs. 303.5 crores, to ECM countries Rs. 221.7 crores, Marine food exports are expanding. In the first six months the export earnings were Rs 40 crores and so will exceed the high target of Rs. 60 crores for the year. In fact exporters are confident of earning Rs. 55 crores in the next 6 months mainly because of the growing demand from the U. S. and Europe who were well represented at the 3 day marine fish fair in November in Bombay. The 50 overseas buyers from the West and Australia visited processing plants, understood the regulatory function of the new Marine Products Development Authority and found their misgivings about toxicity and pollution of Indian marine products false. On the other hand the government is tightening up the handling of fish in boats and trawlers and is thinking of making the Authority not only the licensing authority for marine product exports but also for setting up processing plants. Exports of wool and woolen goods increased in 1972-73 to Rs. 48 crores, being a 34 per cent increase over the previous year particularly in carpets, druggets, and numdas. On the other hand the impetus given to export of ready made garments reported in the last issue (Vol. III page 793) may be lost, if the mills making denim fabrics continue to jack up prices as they did in November from 6.50 per metre to Rs. 9.60 per metre, because of the rising U.S. demand for denim garments. The mills find it profitable to sell their fabric to Hong Kong manufacturers and so are drying up the Indian production. The combined effects of reduction in cash subsidy and soaring prices has placed this group of ready made garment manufacturers in a losing position. Another bottleneck to handloom and engineering goods export from Madras has been the absence of regular sailings for Eastern destinations. The problem of shortage of shipping space is becoming serious for this State's export trade. The Country will earn Rs. 60 crores additional foreign exchange in the next 7 years following the 16 per cent price mark up of iron ore exported to Japan. The increase will be applicable to exports worth 57 million tonnes from April 1973 to December 1980. Also there is to be a 20 per cent price rise for iron ore fines from the same dates. U.S. has offered India and 27 other countries additional amounts of imports to the U.S. of cotton fabric and cotton yarn upto 5 per cent of the agreement. The wagon agreement with Yugoslavia (See Vol. III pages 179 & 635) seems dogged by bad luck. In November there was not the shipping space to export even 30 per cent of the 3,600 wagons. There is also a shortage of axle boxes that go into the manufacture of wagons. The power situation has further clouded the export effort as all four units, Texmaco, Jessops, Braithwaites, ISW and Burns are facing closing down of their plants. It is with regret that one notes that yet another request for extension of time for delivery is being made to Yugoslavia. In the case of manganese ore, the government is planning to cut exports by 20 per cent of the 1971-72 level for this year and 40 per cent for next year to meet the growing internal demand. There has been a spurt in spice export during the first 6 months of this financial year. Exports of 22,550 tonnes valued at Rs 18.76 crores during April–September 1973 should be compared to Rs. 11.5 crores in the same period in 1972 Pepper exports alone are reaching 25,000 tonnes in 1973-74. It has also been decided to export 5 lakh bales of raw jute this year because of the good jute crop. This would ensure a fair return to jute farmers. Sri Lanka has placed an order for Rs. 18 lakhs of PVC pipes and the trade with South East is generally expanding.

Aid: November saw the visit to the Country of high level delegations from the Soviet Union, France and West Germany resulting in a series of long term agreements for increased aid and co-operation between the 2 countries. The 15 year Indo-Soviet agreement provides for Soviet aid in (a) the expansion of Bhilai and Bokaro to an annual capacity of 7 and 10 million tonnes respectively, (b) construction of the oil refinery in Mathura with a six million tonnes capacity, (c) development of the copper mining complex at Malanjhand (d) construction of the Calcutta underground railway project. (e) prospecting of oil, natural gas and coal and (f) petro chemicals, power engineering and shipping. The agreement with France ensures aid in oil prospecting—both on—shore and off-shore — and in Fertiliser plants. The agreement with West Germany provides for increase of and the financing of rural development, fertiliser production and power distribution projects. Denmark has indicated that its assistance to the Five Year Plan will be 250 million Danish Kroners (Rs. 34 crores) consisting of Kr. 147 millions for agriculture, Kr. 17 millions for family planning and Kr. 85 millions for small scale industry. Canada signed an agreement for Canadian $ 10 millions (Rs. 7 crores) to finance the import of potash from Canada increasing the freight costs. With regard to the PL 480 funds, negotiations, the restrictive Senate amendment referred to in the last issue (Vol. III page 796) has been removed by the Senate-House Conference Committee, both in the amendment introduced in the Senate to the Military procurement authorisation Bill and in the Foreign aid authorisation Bill. In return the U. S. administration is required to submit the negotiated agreement with India to both the House and Senate Foreign Relations Committee which will have the responsibility of approving or vetoing it. In light of this, the two countries can pursue their negotiations with a view to reaching a settlement before the start of the Fifth Plan.

International :

Bangla Desh : The first Five year Plan of Bangala Desh referred to in Vol. III pages 569-570 was finalised at the end of November and calls for an outlay of 4,455 crores takas, including foreign aid of 1,800 crores plus an investment of 583 crores in the non-monetised sector. 90 per cent of the Five Year Plan outway is in the public sector and 10 per cent private sector. The priority in the Plan is for the agricultural sector for which the outlay proposed is 1,067 crores takas. The aim of the farm sector including flood control, irrigation and rural institutions is to attain self sufficiency in foodgrains production, increasing the rice output from 11.24 million tonnes to 15 8 million tonnes by the end of the plan period. The outlay for industries is taka 877 crores (19.7 per cent), Power and natural resources, taka 522 crores (11.7 per cent), physical planning and housing, taka 451 crores (10.1 per cent), communications taka 114 crores (2.5 per cent), education and manpower taka 316 crores (7.1 per cent) and health and social welfare taka 220 (4.7 per cent). The first annual plan, 1973-74, has an outlay of taka 595 crores, taka 525 being in the public sector and taka 70 crores being in private sector. In addition there will be an investment of taka 115 crores in the non-monetised sector. The distinctive features of the Bangla Desh plan is its heavy emphasis on the public sector and its explicit provision for the non-monetised sector. The November 3 day meeting of the joint Indo-Bangla Desh Joint Rivers Commission reviewed the successful flood protection programmes underway and established a

time bound flood control programme for the next season, as well as a long term plan for flood protection. MECON'S feasibility study for the 5,00,000 tonnes capacity steel plant in Bangla Desh (See Vol. III page 636) is now underway. The plant is to use imported iron ore from the Bihar area and the locally available natural gas. The newsprint plant at Khulna is being overhauled to meet the growing internal demand and the world wide demand for newsprint. One of the 3 machines that was being used for paper production is now switched to newsprint so that the latter production can be expanded from 30,000 tonnes to 50,000 tonnes per annum. For this year due to the overhauling needs, production will be 30,000 tonnes against the targetted 40,000 tonnes. The internal consumption being 30,000 tonnes, only 10,000 tonnes are available for export. The government has increased the price by 90 per cent from taka 1,140 a tonne to taka 2,150 a tonne. Czechoslovakian aid is being used to increase the plants boilers so that the annual production can be increased.

World Monetary Reform: November 1973 saw little progress in the world monetary reform movement. The important event was the mid November decision by the seven countries (the United States, Belgium, West Germany, Britain, Netherlands, Italy and Switzerland) to terminate 1968 agreement establishing the two-tier market for gold. Under the agreement, the central Banks bought and sold gold among themselves only and at the official rate of $ 35 per ounce which was revised to $ 42.22 per ounce in 1971. They were not to sell gold in the private market which was the second tier and where the price rose steadily to $ 130 per ounce and was around $ 96 in mid November 1973 when the seven country agreement was terminated. The first tier with its official price had little meaning after 1971 when the U. S. made the dollar inconvertible into gold. The termination of the two-tier agreement theoretically sets free the central banks to (a) sell gold in the private market which no one has done and (b) revalue their gold reserves at the free market price of gold, which would, for instance, increase U.S. gold reserves from $ 11,000 million to $ 26,000 million and West Germany gold reserves from 14,001 million Deutsch marks to 30,000 million and so on, which no bank has done. The South African Central Bank has been threatening to resort to the free market to sell its gold, beyond the agreed limit of its balance of payments needs. The common market countries have not taken advantage of the termination of the agreement to settle their accounts in free market price related gold. The effect of the termination of the agreement on the free market price of gold has been almost nil. The oil crisis has more of an effect on the price of gold, which in the latter part of November 1973 rose above $100 per ounce. The governments and central banks are all bound by IMF regulation to buy gold from the market only when it is below the official price and sell it when it is above the official price. The reasons for terminating the agreement and yet acting as if it had not been terminated are manifold. It may be due to the fact that it is of little use or meaning in the economic and monetary situation of the world today. It may be also due to increasing and improving the reserve positions of the affluent countries and giving them an element of flexibility to face the oil crisis. It certainly can contribute to clearing the way for defining the role of gold in the new and reformed monetary system that we should adopt by July 1974. The mystique of gold is still there and the French government and others believe that it has many advantages in serving as the reserve for any monetary system. In a way, since the

Nairobi meeting this development was expected. The gold price can now be left to be settled by the market and the new monetary system can turn to defining clearly the role of SDRs as the new international liquid assets. Gold can then like silver or any other currency find its level in terms of SDRs. Also in November there was a meeting of the Five—UK, US, France, West Germany, and Japan—which have formed themselves into a self appointed steering committee of the group of 20 to reach agreement on the next steps of the world monetary system. One thing that they can do is to end as early as early as possible the system of floating exchanges which they have launched and blessed, in order that world trade does not continue to be distorted and the balance of payments and the development programmes of the developing countries endangered.

Gatt: The 1972 annual report of GATT points to positive and negative factors in the world economic situation and draws lessons for the immediate future. It computes that world output increased in 1972 by 7 per cent (as in 1971), and world exports by 12 per cent. But it points also to the world inflationary pressure continuing into 1973 and the dangers from lack of international co-ordination of the national measures to combat it. If each Country simply takes its own anti-inflationary measures there is a real danger of a deflationary set-back with serious negative effects on world trade, production and employment. It refers to the trends of continuing US balance of payments, persistence of French and West German trade surpluses and the disappearance of the Japanese trade surplus. The positive elements are increased production, increased demand and a sensible reduction in the 1972 unemployment rates. One interesting offshoot of the oil squeeze is the almost total collapse of oil tanker freight rates which in response to the demand and the supply ratio had soared to 450/430 for discharge in the UK and Holland, collapsing in November to 120. The GATT negotiations inaugurated at Tokyo in September (See Vol. III page 714) are being perused in Geneva. The long term agreement (LTA) covering world trade in man-made fibres, wool and cotton textiles now being negotiated will not be concluded by the end of December as originally expected. There are three issues to be resolved. One is whether any exporting or importing country should be given the freedom to make agreements on trade restraints outside this treaty provided they are in agreement with its principles. 90 per cent of all export restrictions come under this clause and so most exporting nations do not wish to see this clause repeated in the LTA. A second problem relates to synthetic fibres and textiles where some developing countries including India, Brazil and Mexico are newcomers and past performance of production or cost efficiency cannot be used to regulate their quotas. There is agreement that these countries should be given generous growth rates provided established forms in this field in Korea and Hong Kong are not hurt. The problem is to translate these principles into action. A third issue relates to the settlement of disputes arising from the agreement. There is to be a Textiles Surveillance Board (TSB) whose functions are the major bone of contention holding up the LTA. TSB has been accepted by US, EEC and Japan and that is a step forward. Is it to be a research body or one concerned with the restrictions which are being imposed in violation of the agreement, should its examination of violations be an expert one or general one, should it proceed by majority or unanimity—these and other issues should be settled before the long term agreement is finalised.

World Food: The United Nations General Assembly on the recommendation of the Economic and Social Council has decided to convene a World Food Conference in 1974, as noted in the last issue Vol. III page 798. The Food and Agricultural Organisation (FAO) at its Geneal Conference in November following the UN decision, approved the holding of the Conference in November 1974 in Rome to which all Countries—and not only FAO members—are to be invited. The World Food Conference will be meeting after a comparatively good year in world foodgrains production. The FAO computes that food output in 1973 rose by 3-4 per cent and over the depressed 1972 levels, mainly because of the good Soviet production of 215 million tonnes which was 9 per cent above target and 28 per cent above the poor 1972 crop. In fact 1972 was the first year since the war when world food output actually declined, while world production increased by 75 millions. The 1973 good performance was due to the good yields of USSR, US and South East Asia in rice. The US crop is 43 million tonnes or a 17 per cent increase, India's total is likely to be 69 million tonnes, which is 9.5 per cent more than the previous season, Indonesia will have a record 25.3 million tonnes, and Burma and Taiwan also share in the increase. Only Pakistan will suffer a decline due to the heavy floods damage suffered this year when 3.1 million acres under food crops including 2.54 lakh acres under rice were either totally destroyed or badly damaged. Against this background the world food conference will (a) study and prepare short and long term measures to solve world food problems, (b) prepare a programme of food aid for less favoured nations and to compensate for natural calamities and (c) recommend additional measures to increase food production, consumption and the trade of developing countries. The FAO proposed agenda will cover (a) maximisation of the production potential of available land (b) extension of the irrigated area (c) expansion of the availability of agricultural inputs to be produced in the developing countries (d) reducing before and after harvest losses and (e) examining and proposing food balance and international trade. The Conference will be a significant step in helping to achieve the objectives of the Second Development Decade, which on the food front we are far from attaining.

World Energy: The UN report, World Energy Supplies 1968-71, shows a continued growth of world energy consumption at 4 per cent in 1971. The US with 6 per cent of the world's population still continued consuming 33 per cent of the World's energy in 1971. US per head petroleum consumption was 9 times that of the world average. China the third rank consumer of energy relies heavily on solid fuels, whose consumption increased by 17 per cent in the world. Japan has become the 4th largest energy consumer and the largest importer of crude. In the 10 years 1961-71, consumption of natural gas increased by 128 per cent, petroleum by 116 per cent, hydro and nuclear enargy by 84 per cent. The future lies with the last resource.

World Illiteracy: World illiteracy is on the increase. In 1970, 34.2 per cent of the world's population of 15 years and over, numbering 783 millions were illiterate and Unesco estimates that in 1980 the percentage will fall to 29 per cent but the numbers increase to 820 million adults. In addition to expanded literacy programmes, population control is the only way to liquidate illiteracy. The affluent countries which have a sizeable marginal illiterate population are planning to eradicate the evil by 1980. Defining illiteracy as the inability to read and write as well as the

average nine year old. UK computes that there are 2 million illiterates in England and Wales. It plans to raise the level of functional literacy from 9 to 13 years. US estimates that there are 19 million adults totally or functionally illiterate and another 7 million primary and secondary students with severe reading problems. This must be ended by 1980 as it computes that the labour market for unskilled workers will shrink from 17 per cent to 5 per cent in 1975.

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II. Agricultural Development

Paddy:

By November end both FCI and the State Civil Supplies Corporation had exceeded their kharif procurement targets. FCI had procured 1,01,000 tonnes in the open market. The State Civil supplies Corporation had similarly procured and has also over fulfilled its target of 1.1 lakh tonnes of kharif paddy procurement. On basis of this good kharif performance, the rabi crop, that is the navarai and the samba crop planning and sowing is on. Of the 32 lakh acres under navarai paddy, 28 lakh acres are under HYV and the rest under conventional ones. In Thanjavur district 11.5 lakh acres are under Thaladi and Samba crops, with Ponni leading at 3.45 lakh acres, IR-20 at 3,05 lakh acres, CO-25 at 3 lakh acres and ADT-27 at 50,000 acres. All these varieties have to be protected as they are susceptible to various pests and diseases. A new variety IR-26, which is a cross between IR-20 and TKM-6, has just been released. It is resistant to a variety of pests—the brown plant hopper, the leaf hopper and to some extent against the stem borer, grassy stunt virus, rice blast and the tungo virus. It is insensitive to changes in day light, matures in 125 days and is a better yielder and grain quality than IR-8 or IR-20. It can be grown in both irrigated and rainfed conditions and is likely to find favour with the Thanjavur farmers rapidly. The Navarai crop in the Northern districts—Chingleput, North Arcot and South Arcot—faces some uncertainty because though there were adequate rains in July, August and September, November was an unusually cool and dry month, with no rains until the last week. These northern districts which rely on tank irrigation have had a good kuruvai crop but with losses due to evaporation, seepage and use, the storage in the tanks has dwindled making the navarai season in these districts problematic. The minor irrigation programme should address itself to improving the storage capacity of the tanks so that the heavy loss from seepage can be reduced. There should be a systematic exploiting of the ground water resources in the rich soils of Chingleput and North Arcot districts which are unused because of the absence of wells. The other problem which the State faces is fertilisers shortage as pointed out in the last issue (Vol. III page 799). The State's fertiliser requirement for its food and cash crops is 1 85 lakh tonnes of nitrogen 60,000 tonnes of phosphate and 50.000 tonnes of potash. The total availability is only 70 percent of this demand. Production of fertilisers within the State is not satisfactory. Not all of Madras

Fertilisers production is available to the State, Neyveli has had to stop and cut back on its fertiliser production because of the lack of lignite and of labour problem. SPIC will produce 25,000 tonnes of urea per month from August. The need for a giant fertiliser plant at Cuddalore is urgent, particularly because this State can provide a large surplus in paddy for use by Kerala, Maharashtra and other deficit States — (See last issue Vol. III page 799-800). Fortunately SPIC'S urea production will meet the farmer's needs where the tradition has grown for urea to be used as the nitrogen fertiliser. Given this fertiliser scarcity, the government steamlined the distribution network and introduced a two tier system from October 1. All fertiliser dealers have been converted by the producing firm into retail outlets, thus abolishing wholesalers in this sector. The co-operatives are responsible for poor distribution. Each district's need is assessed and receives its percentage share of overall availability from pool and non-pool sources. Inter district movement of fertilisers is banned. Each farmer is given an identity card showing his nitrogen requirements and the supply made to him. For non-pool fertilisers, groups of farmers are attached to a retailer who supplies also agrinst the card. There is the same kind of shortage in regard to pesticide. The commonly used pesticide is BHC of which 40,000 tonnes per annum is needed. For the navarai crop 15,000 tonnes is needed and the 10,000 tonnes availability involves the same kind of stream lined distribution. There is only one firm is the State producing pesticide - the Micro Farm Chemicals at Mettur. This plant't capacity should be expanded and another unit established. The estimates committee of the legislative Assembly has come out against government take over of foodgrains, because of the government's inadequate storage facilities and lack of a sound distribution machinery. It recommends the opening of more fairprice shops and extension of the cheap rice scheme to all non-rice growing areas. But unless the State has the large resources needed to subsidise the scheme, it will have to take over the wholesale trade at some point of time - after it has readied itself. Meanwhile, despite the rise in issue prices announced in October (See last issue), Vol. III page 199) the government released 20,000 tonnes of rice through the fair price shops at the old prices, as this stock was acquired before the increase in procurement prices mentioned also in the last issue. Hence until the beginning of the year, the poor sector has been able to buy the rice at the old price of Rs. 1.10 per litre for the coarse and medium varieties.

Some Research Results:

The Tamil Nadu Agricultural University's experiments in farmers' field growing gingelly in different conditions in Coimbatore, Salem and Chingleput districts show that the crop yield can be increased by 20-25 per cent by the use of manganese sulphate at the rate of 4 kg per acre. It leads to better use of other fertilisers by the plant. This simple result also for increasing the yield of gingelly—an essential oil seed of which we are in short supply—should be spread throughout the Country's 24.29 lakh hectares which produce 56.8 lakh tonnes every year. The largest growers are UP (6.56 lakh hectares), Rajasthan (4.99 lakh hectares) and Madhya Pradesh (3.5 lakh hectares). The small cashew plantations in this State under both private sector and the forestry department can be considerably expanded, particularly to meet the growing future export demand of the product and the drying up of the import sources from Africa. It has been computed that in the Country we will have to grow 4.4 lakh tonnes of raw nuts by 1980. and 7.1 lakh

tonnes by 2000, calling for bringing 3.8 lakh hectares under new plantings and 1.7 lakh hectares under replantings. It is therefore urgent that higher yielding cashnew varieties be developed and made available to the growers. In the neighbouring State of Karnataka such a programme is underway with 50 new varieties whose quantity and quality of nuts yielded will be much more than those of current varieties. The new cashew pest control measures can further increase the yield. Evaluation and tests results will be known during the year for diffusion in this and other States. Another development concerns the areca plant where a new variety, the Mangala areca, is both more compact as a plant and yields 70 per cent more fruit. It can be grown widely in the State. Again a new high yielding green gram PS 16 has been developed by the Agricultural University in Bangalore which can be used in this State also as a high yielder and of better quality.

Cotton :

Further to the development of the long staple varalakshmi referred to in the last issue (Vol. III, page 791), the State Farms Corporation of India states that it will be grown not only over the 7,000 acre Raichur farm but also in Tamil Nadu and Andhra Pradesh. A parallel development is the emergence of the elite Desi cotton variety which has the fibre strength of the Desi varieties but which has 1.2 inch fibre length, which again is a substitute for the imported Egyptian and Sudanese Cotton. It can be grown in our large dry black soils, is free of pests and so requires no plant protection and yields around 900 kapas per hectare.

Chengam :

The State farm in Chengam whose progress was referred to in Vol. III page 640, shows for its first year of operation (1972-73) a profit of Rs. 2 lakhs. It grows on its 8,000 acres groundnuts, maize, jawar, black gram, redgram, sunflower and vegetables—all dry crops. For this year its expanded and successful functioning will result in a profit of Rs. 10 lakhs.

Small and non cultivators :

The recent table published by the Union government on the percentage of population in the small cultivator household and non-cultivating wage earner households in relation to the rural population throws light on the task faced by the State in eradicating poverty and the basis for the perspective plan emphasis in this regard. It is the non-cultivating wage earning households in which this State has 10 times the proportion to rural population as Punjab that constitutes the core of the poverty problem.

State Union Territory	Small cultivator households			Non-cultivating wage earner households		
	Males	*Females*	*Persons*	*Males*	*Females*	*Persons*
1	2	3	4	5	6	7
1. Andhra Pradesh	3.92	4.41	4.16	19.51	21.58	20.45
2. Assam	7.90	7.67	7.79	5.57	5.72	5.64
3. Bihar	5.84	1.09	5.40	1.16	1.09	1.13
4. Delhi	1.10	1.30	1.20	4.75	5.66	5.16
5. Gujarat	3.71	3.48	3.60	7.84	7.66	7.75
6. Haryana	2.80	3.10	2.94	12.34	12.96	12.63
7. Kerala	1.28	1.35	1.32	0.92	0.97	0.95
8. Maharashtra	4.66	4.50	4.59	12.78	13.50	13.13
9. Mysore	3.08	3.15	3.11	8.10	8.63	8.36
10. Madhya Pradesh	5.01	4.81	4.91	7.95	7.67	7.81
11. Manipur	2.07	2.43	2.25	0.18	0.11	0.14
12. Orissa	5.07	4.99	5.03	9.68	10.07	9.88
13. Punjab	1.49	1.50	1.49	2.15	2.00	2.08
14. Rajasthan	4.33	4.34	4.34	2.97	2.78	2.88
15. Tamil Nadu	4.14	3.99	4.07	31.47	26.50	29.13
16. Tripura	3.00	3.41	3.20	1.33	1,42	1.37
17. Uttar Pradesh	3.62	3.34	5.48	4.94	5.04	4.99

Dairy Farming:

The Tamil Nadu Dairy Development Corporation (TNDDC) is setting up a Jersey farm at Kodaikanal with New Zealand aid. From this farm, cheese is to be produced on a large scale. TNDDC is developing a marketing net work for cheese also being produced in some areas where there is surplus milk. It will cover cheese that is being produced at the rate of some 150 kg. daily by private producers in Hosur, Ooty, Kodaikanal and in the future by the Kodaikanal Milk Union. There is a growing demand for cheese in the State and the result of the TNDDC programme will bring down its price from Rs. 22 a kg. to Rs. 17. It will form an important nutrient in the State diet. The Madhavaram Dairy under TNDCC began producing 1 lakh litres of milk from early November. It is experimenting with a mobile milk bar which sells around 3,000 litres a day in the form of hot milk, cold milk and flavoured sterilised milk in specialised containers. Such milk will be available to people in the city in plastic bags when the firm which has been set up begins producing these plastic containers.

Tea and Coffee:

Tea output during the first 9 months was 340.4 million kg being a mere 7.6

million kg. more than 1972. While North Indian tea increased by 8.7 million kg. to 269 million kg., South Indian tea fell by 1.1 million kg. to 70.9 million kg. compared to 1972, by 4.6 million kg, compared to 1971. On top of this fall in production, the Southern plantations face a demand for higher wages and a strike. Further, the South Indian tea has fared very poorly in London auctions. While the North Indian tea price increased by 3.43 pence a kg. compared to last year's price, the South Indian price fell by 0.98 pence a kg. World tea production has been lagging at 547.7 million kgs., 15 million kgs. more than the first 9 months of 1972. On the export side, from January–June 1973, Indian tea exports were 67.7 million kg. which were 11 million kg. less than the January to June exports of 1972. By contrast, Bangla Desh which entered the tea export market only in 1972 has increased its exports by 8.2 million kgs. Kenya by 13.7 million kgs. and Uganda by 5.5 million kgs. Given the labour trouble in the South and in the Calcutta port, it looks as if like 1971-73 when our exports were only 201.3 million kgs. against the export quota of 211.5 million kgs. (See Vol. III page 719) the 1973-74 larger quota of 217.8 million kgs. referred to in Vol. III page 575 will not be attained. Under these conditions there are two actions urgently needed. First the efficiency of the plantations must be increased and their cost of production reduced to make them internationally competitive as pointed out in earlier issues (See Vol. III page 502). In this connection the Government is now allocating different amounts of fertilisers to different gardens with a 10 kg. per hectare higher allocation than in 1974. Second our promotional campaign needs to be changed and stepped up. This Bulletin has supported the demand for setting up a tea export promotion council (See Vol. III page 644) which to date has not been done. Drastic changes in the structure and personnel of the Tea Board including the appointment of a non-official specialised in sales promotion and tea marketing is under consideration of the Government. This may in part meet the need for a vigorous promotion programme for export markets.

Coffee, on the other hand, continues to do well. The coffee plantations face a shortfall of copper sulphate needed to fight the coffee leaf disease. There is a world shortage of this product and the Indian price has gone up from Rs. 1,500 to Rs. 8,400 a tonne. Under these conditions, the copper sulphate needed can be produced within the Country, by importing the necessary copper scrap for the amount not available from Hindustan copper. The Coffee Board in order to increase domestic consumption has decided to lower the price of coffee from Rs. 9.60 per kgs. to Rs. 9.40 inclusive of sales tax. Its depots throughout the Country have been selling the Board's special blend of coffee at Rs. 10 per kg. from December 1, 1973.

On the labour front the plantations face a mixed situation. The South Indian tea plantation' labour unrest was earlier referred to. In the North, the Assam Plantation labour have called the Government's attention to the declining employment in the plantations from 1.5 to 2 workers per acre to less than 1 worker, the fall in the work force from 5.4 lakhs in 1951 to 4 lakhs today, the mismanagement of some gardens leading to their being closed, the need to revise the wage structure which is based on the original (British) system of family recruitment whereas now there is only one worker per family and the need for providing some kind of security on retirement, given the fact that workers have cut themselves off from their villages from which they came and cannot return to them. In fact the Assam workers are the first group to take over and run one of

the closed gardens. The forming of workers co-operatives to take over other such gardens should be promoted. The comprehensive labour welfare scheme (CLWS) run by UPASI was reviewed in (Vol. III page 125). It is now 1 year since this 6 district scheme was launched in Annamalais Coorg, Central Travancore, Nilgiri-Wynaad, Kannan Devan and Chikmagalur. Its 9 point programme is an integrated labour welfare service including family planning, medical facilities, creches, schools and housing. The first year's assessment is positive in focussing the management's attention on the need for family planning - its human, managerial and medical aspects as part of normal welfare facilities. Social science research results are intelligently applied and the result is that the motivational programme is successful and sterilisation demands are increasing in estate and government hospitals and FP clinics. The integrated programme has covered 70 per cent of the target group by contraception and 100 per cent by MCH. Now it is proposed that as part of the motivational programme, condoms, pills, IUDS and all other facilities should be made available to the workers. The trade unions are being more fully involved in the programme, the educational aspects intensified and the nutrition and immunisation schemes expanded. Altogether CLWS has many a lesson to teach other managements and trade union groups in the Country in this integrated welfare and family planning service approach.

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III Industrial Development

Salem Steel :

As reported in the last issue (Vol. III page 802) work on the first phase of the Salem steel plant is progressing. In the first phase which will cost Rs. 88 crores, 30,000 tonnes of stainless steel sheets will be produced out of imported hot rolled stocks to be replaced later by sidegree scrap from Bhilai. Hence the work now in progress is to have the land readied by March and have the buildings started for the cold rolling complex installation. There has been unconscionable delay in the commissioning of Salem but even more so in the case of Vishakapatnam and Vijayanagaram, strengthening the feeling in the South of a move against these plants. The economics of these plants are open to discussion, though the economics of large scale plants for an economy and society like India is open to question. But the decision once having been taken on policy grounds, all the long winded debates as to whether it would be more economical to expand TISCO together with Bhilai and Bokaro rather than set up a Vishakapatnam and Vijayanagaram (See Vol.III pages 485, 645, 721) was really a delaying tactic and open to suspicion of wishing to go back on decisions. Similarly the reopening of the questions of Salem's product mix and capacity levels had similar motivations. Now all 3 Southern plants are provided for in the Fifth Plan, and for Salem, Rs. 185 crores is provided. With the remaining Rs. 100 crores, work will start

in the second phase which is to set up electric arc furnaces for melting stainless steel, continuous casting machines for making slabs and hot rolling them to provide feed stock for the cold mill. And then the final phase will start on the electric pig iron plant and for conversion through LD converters into steel. The total investment at the end would amount to about double what is provided in the Fifth Plan namely Rs. 350 crores. On the first phase, quotations were received from farms in 6 countries, US, Japan, Canada, West Germany, France and Sweden for production technology, product development and applications and training in manufacture of cold rolled stainless steel sheets and before the end of March an agreement will be signed with the selected firm for the provision of know-how, machinery and equipment and hot rolled stocks in the initial years as inputs to the cold rolling mill. One of the delays has been with building the 9 KM broad gauge railway siding from Salem Junction to the plant site which makes it difficult for HSCC to transport the huge electric shovels and other construction materials. When the large machinery from abroad starts arriving, this facility will become a must. After a lot of useless studies on the cost-benefit of the investment, the outlay of Rs. 1.8 crores for the siding has been approved by the Railway Board in its 1974-75 budget. By the end of 1974 the siding should be ready if the plant work is to proceed on schedule. About 6 months has been unnecessarily lost on this, this year. The Rs. 98 lakh road extension involving a fly over and serval bridges and culverts over the 14 KM stretch is now also under way. Water supply from the Cauvery to Poolampetti is being provided by the State government, which will also help Salem city needs. The Housing Board is working on the steel plant colony. The ore for the plant will come from Hospet in the first instance, but for the future the Kanjamalai deposits should be readied when the Hospet supply becomes non-competitive. The ancillaries around Salem are being prepared. The State Planning Commission has recommended that SIPCOT should contract with IIPOR to undertake the necessary feasibility studies so that not only entrepreneurs from other parts of the State and other States but also local entrepreneurs can be interested and involved. Parallel developments will soon be underway in Vishakapatnam and Vizianagaram, now that the Project Investment Board has cleared the two projects for a total cost of Rs. 840 crores each. The two plants will complement each other, Vishakapatnam providing wire rods, light and medium structurals and billets for sale and rerolling while Vizianagaram will produce hot rolled strips and coils and billets. The gestation period of each plant has been reduced by going for this kind of output instead of first producing pig iron and then steel. After the questionable delays referred to earlier, it is expected now that with detailed projects reports from SAIL coming in within the next 15 months, work will be scheduled to enable the two plants to go on stream at the end of the Sixth Plan.

Neyveli:

The draft Fifth Plan issued by the Union Planning Commission referred to earlier, while acknowledging that Tamil Nadu would face a power deficit at the end of the Fifth Plan after all the projcts in the Plan including participating in Kerala's Idikki project and Karnataka's projects, does not however provide for the second Mine cut at Neyveli and the 1,000 MW thermal station that it can feed. At the end of the Fifth Plan, power needs in the State will be 3,620 MW, while the maximum generation will be 2,600 MW. The State therefore faces industrial and agricultural strgnation if this

gap is not met. The State Assembly in November unanimously adopted a resolution, in which all political parties joined urging the Union government to include the second mine cut and the 1,000 MW thermal plant at Neyveli in the Fifth Plan. The resolution was taken to Delhi by the Minister of Labour and presented to the Union Cabinet as it was reviewing and approving the Fifth Plan. At the NDC meeting in December, the project was strongly urged by the Chief Minister. It is hoped that in the finalisation of the Plan in February, this much needed power project for the State will be approved. If it is cleared and work started now, according to the feasibility report, the phasing of the commissioning of the five 200 MW units will be from October 1978 to February 1981. That is at least two units can come into service before the end of the Fifth Plan and help partially to cover the power gap.

Kalpakkam :

Following the blocking of the Canadian imports of components for Kalpakkam (See Vol III page 645), a programme to provide within the Country as much of the nuclear and conventional equipment for power plants as possible is under way. Most components are now being manufactured in the Country under the supervision of the Department of Atomic Energy. For certain raw materials and proprietory items and components that cannot be produced locally, alternative sources in France and the Soviet Union are being used.

Hindustan Photo Films :

Contrary to the analysis and somewhat hopeful prospects concerning this year's operations of Hindustan Photo Films set forth in Vol. III page 260, it looks as if 1973-74 will close with a turn-over of Rs. 8.5 crores against the target of Rs. 14 crores and instead of breaking even will incur a loss of Rs. 2 crores adding to the accumulated Rs. 14 crores loss. In this case the reason for the poor performance does not rest primarily with the firm or the management. There is the usual under-utilisation of the 6.15 million sq. meters capacity but with the present outmoded technology and outdated machines in the plant it may be disastrous to work to full capacity. Already its dated technology is leading to a high rate of rejection, 50 per cent for X-ray and roll-films and 25 per cent for cine positive, and working to full capacity with this defective equipment will result in producing low quality products with a higher rate of rejection. Certain obstacles to production can be removed. The 75 per cent power cut was one such and the shortage of mythlene chloride resulting in shutting down of the 5 machines. Here Mettur Chemicals can be made to increase the supply and the rest can be made up by imports. Also the increase in product prices, 3-6 per cent for X-ray film and 4-10 per cent bromide paper made in March 1974 can make for a marginal increase in receipts. The real problem is to replace the existing machines by simpler lines of production, for new products and diversification and for this Rs. 25 crores have been provided in the Fifth Plan and one of the well known firms–Dupont, Kodak, Agfa or Fuji—is being chosen to recondition the unit. When this is done the unit will operate to meet the Country's demand for X-ray and cine films and will operate profitably. One of the questions now under study is whether the manufacture of polyester chips should be transferred from this unit to one of the petro-chemical complexes. Technical opinion is that because of the special quality of chips needed by this plant and its production of silver nitrate, stabilisers, sensitisers and hardeners their production should continue in this unit. When reconditioned the plant will also produce graphic arts paper, roll film, aerial film and cine

negative. The reconditioning programme of the unit should be launched quickly.

Sugar :

Of the 45 lakh tonnes of sugar output for the current season referred to in the last issue (Vol. III page 786), the Southern States will contribute 21.6 lakh tonnes. If the average cane recovery is maintained at 9.5 per cent during the Fifth Plan, the Southern States can exceed their target of 35.83 lakh tonnes as a means of meeting the all India Fifth Plan target of 65 lakh tonnes.

Fertilisers, SPIC & Cuddalore :

In mid November SPIC commissioned the first of the two generators manufactured by the Tiruchy Boiler Plant at a cost of Rs. 7 crores. With that the unit will be able to commission its ammonia and urea plants upto half the capacity of 1,100 tonnes of ammonia and 1,600 tonnes of urea per day by July. This will in part make up for the serious fertilisers shortage faced by the farmers in the State as noted earlier. To expedite its distribution, the State government is improving the road network between Tuticorin and Madurai at a cost of Rs 170 lakhs. Further the government is using SPIC's technical and managerial facilities to establish an even larger Fertiliser Complex at Cuddalore to produce 1,900 tonnes of ammonia, 1,200 tonnes of complex fertilisers and 1,500 tonnes of urea per day at a cost of Rs. 140 crores. The Union government's clearance of the project is now awaited so that the fertilisers requirements of this State and the Southern States can be met during the Fifth Plan.

Plastics :

The high cost of plastics acting as a deterrent to its increased application in the transport industry was discussed at a November Plastics Institute seminar in Madras. The Integral Coach Factory and railways generally are a major consumer of plastics. In rolling stock, plastics are replacing metal for reasons of economy which include cost, both fixed and recurring maintenance cost, life and scrap value. All these factors are complementary to one another and the economics of plastics use can be arrived at by using cash flow techniques. ICF found that PCV did not stand up when used for roof panelling because of its tendency to warp and buckle. It is being used for fabricating the new type of rolling stock for the under ground railway now planned for Calcutta and later for Madras. Similarly Ashok Leyland, while pointing out the lack of R & D in this area, high cost and lack of quality control facilities, is experimenting with the use of plastics in the automobile industry. Plastics are also growing in use in aeronautics, space and shipping construction in the Country.

Madras Aluminium :

Madras Aluminium which has been producing upto capacity since the lifting of the 75 per cent power cut operating all its 56 primary aluminium pots and producing 1,500 tonnes a month, has commissioned its expanded capacity. It will double its production from the present 12,500 tonnes to 25,000 tonnes and has the assurance of the needed power supply from the State Electricity Board. Given the serious short supply of aluminium, this expansion will also increase the profitability of the enterprise.

TIDCO :

A number of joint sector projects are being sponsored by TIDCO. In Karaikudi the Tamil Nadu Chemical Products with a capital of Rs. 4.5 crores is being set up as a joint sector project to manufacture 3,000 tonnes per annum of sodium hydro-sulphate. The chemical product has extensive

uses in the textile and sugar industry. The technology is being imported from Mitsubishi gas chemicals, Japan, and will avoid the use of zinc whose international price has risen fourfold. TIDCO is participating to the extent of 26 per cent of the capital. Another joint sector project under study is the setting up of a graphite factory in Ramanathapuram District to exploit the ores available in the Sivaganga area. A third joint sector project discussed with the Yugoslav delegation which visited Madras in November was the setting up of a major foundry unit with a capital of several crores of Rupees in order to meet the sophisticated foundry needs of some major engineering units in the city.

SIPCOT :

The Ranipet complex of SIPCOT (See Vol. III pages 351 & 579) was formally inaugurated in mid November. Covering an area of 712 acres divided into five zones for heavy, chemical, electrical, medium scale and small scale industries, the 62 plots will house 60 major and medium industries and 150 small industries. At the inauguration, five units-Tamil Nadu Chromates and Chemicals, Vitia marine and Pigments, Tools, Secals and Appollo Tubes were initiated at a cost of Rs. 7 crores which by 1975 will increase in number to ten times the capital of the inauguration day. A Rs. 20 lakh electricity sub-station is being developed in the complex. It is agreed that the raw materials for the industries for this and other complexes will be secured by SIPCOT from other States like Bihar and Orissa. This will also promote Inter-State co-operation.

Tamil Nadu Co-operative Marketing Federation :

The main objective of the Tamil Nadu Co-operative Marketing Federation has been on the one hand to make available to the farmers the needed inputs and on the other promote agro industries. The federation has been since 1969 entrusted with distributing non-pool fertiliser and from May 1973 pool fertilisers which it does through agricultural co-operative societies. It has also an expanding agro industries programme. It has established a Rs. 28 lakh Fertilisers Granulation Plant at Mannargudi with a capacity of 45,000 tonnes per annum a Rs. 9.25 crores cold storage plant with 1,250 tonnes capacity for storing fruits, vegetables, and milk and a tractor workshop for hiring and serving tractors. It is also setting up at Vridhachalam a Rs. 42 lakhs sunflower seed oil extraction plant and a Rs. 117 lakh groundnut oil extraction plant at Tiruvannamalai. Other processing plants for coconuts and cashew are also being planned.

Handloom and Yarn :

Handloom exports in the first 6 months of this year have increased. Bleeding Madras exports have increased from 73,000 metres in the first half of the last year to 1.77 lakh metres (Rs. 3.39 lakhs to Rs. 9.53 lakhs) during the first six months of this financial year, Madras handkerchiefs from 62 lakh metres to 72 lakh metres (Rs. 1.81 crores to 2.91 crores) and so too the export of lungis. Both cotton yarn and rayon staple fibre yarn declined in prices sharply at the end of November. This fall in yarn prices was also related to the Supreme Court judgment at the end of November referred to earlier which vacated the unconditional stay orders from various High Courts and upheld the right of the government to fix the price of yarn, even if it meant loss to the producer for some time. This clear verdict which was awaited both by the government and the mills (See last issue, Vol. III pages 803-804) took all of them by surprise. The traders who had obtained unconditional stay orders from the High Court (as many as 1,900 stay orders had

been obtained by the trade all over the country) based on the stay orders granted to Meenakshi Mills by the Supreme Court were all caught on the wrong foot. Many mills did not maintain separate accounts between the control and the actual selling prices. As of the end of November it was not known if the extra money received by the traders from the weavers and by the mills from the traders would be paid back or adjusted against future sales. All forward sales had to be cancelled or their terms of sale revised in accordance with the control prices. Now that the Supreme Court has given its decision in favour of price control, the goverment must come out with a clear policy on the price of yarn and relieve the distress so long suffered by handloom weavers. As noted earlier, the Planning Commission's task force Fifth Plan proposes a 25 per cent increase in yarn availability at 480 million kg to the handloom sector. It proposes to increase cotton spindleage by 5.7 million spindles over the 1972 level and sanction new spinning capacity where there are handloom concentrations. In 1972 the yarn delivered to the handloom sector was 377 million kg which was inadequate and whose distribution in 1973 was chaotic. It is now possible to establish a fair price policy, increase the supply and entrust the distribution to the State Governments.

Leather :

Leather exports have been declining in volume, though the value increased in accordance with the government's aim and restrictions. For the period April-October 1973, ET tanned hides and skins exports was Rs. 59.21 crores against Rs. 55.39 crores for the same period last year, and Rs. 38.81 crores against Rs. 22.61 crores in the case of wet blue leather exports. There was a small increase in the export of finished leather. In early December leather exporters were still awaiting government action to help create the infrastructure for export of finished leather. The only move in this direction was that in mid November the chief controller of imports and exports revalidated the list of machines for import by exporters of finished leather, which will enable leather exporters to import the needed machinery without delays in obtaining a license. The value limitation for the import of machinery for finished leather has also been relaxed. But this apart, the leather manufactures are still awaiting the government supply of dyes and chemicals, the 15 per cent cash subsidy etc. There is also an external constraint in the export trade. Due to the tight money situation in EEC countries and the high rates of interest, importers there are reducing their inventories, with the result that the demand for leather goods declined during November 1973. Prices also fell in the month in the case of wet hides for instance from Rs. 38 per piece to Rs. 30. The Leather Export Promotion Council should more speedily increase the infrastructure for producing leather goods in the Country. CLRI has provided Kerala State with an important techno-economic survey for the development of the leather industry in the State. The State produces twice the all India average—8.3 lakh hides and 9.2 lakh skins and exports it all to Madras, Kanpur, and Calcutta because there are no tanning units in Kerala. It has also all the needed tanning materials like cashew-testa, wasting about 2,000 to 4,000 tonnes of it annually. Chemicals like sulphuric acid, lime, soda ash and sodium sulphate are available in the State. It would have to bring chrome extracts, dyes and pigments from other States. The report proposes starting a four acre complex which would include a tannery, two footwear units and a leather goods unit at a cost of Rs. 1 crore. The tannery would utilise 500 raw hides, 50 buffalo hides, 50 buffalo calf-hides and 1,000 goat skins a day, the two footwear units will have a daily output of 850

pairs and the leather goods unit make Rs. 2.4 lakhs per annum of suit cases, brief cases, and wallets. In 3-5 years, the complex will be producing Rs. 1.7 crores worth of leather goods annually and export the surplus skins to other parts of the Country.

Private Sector Report:

The Deccan sugar and abkari company has had a bad year for the year ending 31 May 1973 according to its annual report. Its profits declined to Rs. 14.28 lakhs against Rs. 41.44 lakhs for the previous year. The turnover increased from Rs. 811.48 lakhs in the previous year to Rs. 920.17 lakhs in the reporting year, but its net trading profit was Rs. 53.29 lakhs compared to Rs. 152.64 lakhs during the previous year. This was due to the fact that though the quantity of cane crushed at both its Pugular and Samalkot factories was larger—1,48,234 tonnes in Samalkot compared to 1,25,381 tonnes the previous year and 3,04,679 tonnes in Pugulur compared to 2,25,042 the previous year, the recovery in both plants was low. At Samalkot it was 8.89 per cent compared to the previous year's 10.8 per cent. In Pugulur it was 8.18 per cent compared to 9.56 per cent the previous year. The poor quality of the cane was due to the weather conditions. On the basis of the Union government's price, the Samalkot factory paid Rs. 102 per tonne to the growers. In the Pugulur factory in accordance with the Tamil Nadu government's policy, the price paid was Rs. 99.10 per tonne. Cane plantings at both factories for this year are high because of the good cane prices and it is expected that Pugalur will crush 3.5 lakh tonnes at an average recovery of 9 per cent, and Samalcot 1.7 lakh tonnes at a recovery of 9.4 per cent. The firm expects to earn a considerable excise duty rebate announced by the Union government to maximise production (See last issue, Vol. III, page 786). It also has applied for a term loan of Rs. 110 lakhs to IFCI & ICICI to expand Pugulur to crush 1,600 tonnes per day and is planning to apply for further expansion to 2,500 tonnes and 2,000 tonnes a day under the Fifth Plan provision. In distillery and gas, production was reliatively normal. It is expected that this year will be a normal year.

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IV. Education Science and Health

The December 1972 tally of unrest in educational institutions was 14 incidents in 8 States, (See Vol. III page 119), while in 1973 March and April, there were 23 instances of unrest (Vol. III page 355). The increase in these incidents of student unrest appears to coincide with the examination seasons. In November 1973 there were student agitations and violence in 8 places — Srinagar, Nalanda, Trivandrum, Jammu, Kanpur, New Delhi, Patna and Madras, coinciding seemingly with half-yearly examinations. Students from a college in Srinagar shouting slogans entered a nearby girls' college where they set fire to the science laboratory and the recreational wing. As a consequence schools and colleges were closed in Srinagar from 7th November. The unrest spread to two other major town, Anantang

and Sopore where students and police repeatedly clashed. Following the unrest, all educational institutions in Anantang, were Sopore and Barnmulla closed. Reacting against the attack on the students in the women's college in Srinagar, a violent crowd of students in Jammu swarmed into the central secretariat and set fire to a government bus. The army had to be alerted as violenee continued, with injury to 200 policemen and officers. One student was killed and two injured in police firing following an attack by students on a magisterial party checking ticketless travel in Hilsa Railway Station in Nalanda district. Besides closing all educational institutions, the rail services on the Fatwa-Islampur line was suspended and section 144 has been promulgated in the Hilsa town municipal area. In Kanpur when a pupil of the Government polytechnic was knocked down and killed by a passing truck, the students turned violent. The driver was beaten up and the vehicle burned. On the arrival of the police the students resorted to brick batting resulting in police fire fatally injuring one and seriously six others. This incident spread further in attacks on government and private buildings and private houses. Trouble started in Patna when students tried to break open the gates of the Ayurvedic college and drag out students who were willing to sit for the Homoeopathie Diploma examination. Police burst tear-gas shells to disperse the crowd. The delay in the publication of the first year LL.B. examination results of the Kerala University led to a demonstration by students of the Law Academy. The demonstrators gheraoed the Vice-Chancellor and resorted to stone throwing. Following the clash between students and police in Shandara, the Delhi University and colleges were closed for two days. Tamil Nadu which was comparatively free from student agitations experienced a spell of student demonstrations, in November and December in the wake of the publication of reports of the two commissions of enquiry, into the incidents that occurred at Clive's hostel Tiruchirapalli and Palayamkottai last year (See Vol. II No. 12 page 31 and Vol. III page 38). In one incident, 24 members of the public, 21 students and 6 policemen were injured. The sudents of the Annamalai University went on an indefinite strike. Students in many towns in the State boycotted classes and demonstrated on the same issue. As a result schools and arts and science colleges were closed during November and December. The question is raised whether it would help if all students in the arts and science colleges should be inducted in the NSS, Youth Corps and other such rural development schemes for one or two years, during which the educational system could be reformed.

Educational Reform:

The proposals for reforms in examination and evaluation systems made by the University Grants Commission (See Vol.III pages 725-726) have gathered momentum with the Union Education Ministry expressing agreement with the scheme. The view that the performance of students cannot be accurately valued by the allotment of marks as is done at present and should therefore, be awarded grades in examinations as part of a system of assessment is being generally accepted. But as this involves fundamental changes in existing procedures, discussions with Vice-Chancellors and professors are necessary for their application. The UGC has asked the 12 selected universities for proposals for development of question banks internal assessment and organisation of workshops and seminars. On the question of autonomous colleges (See last issue, Vol. III, page 809), no firm proposals have been received by the UGC or the Union Education Ministry.

The Madras University is engaged in the study of the proposals of autonomous colleges made by the UGC. Meanwhile the revision of syllabi for the courses in colleges was circulated to all colleges in November and December and the final draft revised for adoption in the next academic year. The Vice-Chancellor announced the sanction of Rs. 17 lakhs for the construction of a hostel, library and administrative and humanities block for the University Centre at Tiruchi, which will be ready by July 1974. In the Post-Graduate Centre at Tiruchi, six departments, namely English Literature, Economics, Mathematics, Botany, Physics and Chemistry are to be started. As part of its policy for providing job-oriented courses, the university has introduced a two-year post-graduate diploma course in accountancy and taxation laws. The Tamil Nadu government has sanctioned 10,200 posts of teachers for 1973-74, under the Union Government's half-a-million job programme. The right to establish and administer private schools by minority groups, without government's permission was recognised by the Joint select Committee examining the draft Bill. However, the minority schools should furnish the name of the school, the educational agency, the courses of study etc. Further, new schools are to obtain prior sanction of the government to start the school. Private schools are to levy fees as specified by the government. Inaugurating the library week celebrations organised by the Local Library Authority, the Education Minister suggested that LLA should seek a loan of Rs. 15 lakhs from the UGC for expansion of its activities. A proposal has been made for establishing a women's section in the Madras District Central Library.

Technical Education :

In order to generate science consciousness among the young people, the National Council of Education Research and Training held a science exhibition in Teen Murti Nagar in connection with the 84th birthday celebrations of Jawaharlal Nehru. Besides the Delhi University, the Indian Institutes of Technology, Civil Aviation, Indian Telephone, Indian Railway and other Government establishments took part. The exhibits were principally from boys and girls below 17 years. Some of the outstanding items on exhibition were : a simple instrument to detect adulteration of lead, a steam-powered ropeway, a water-clock accurate to the second, a rocket model, remote controlled bus and electrically controlled inauguration system which automatically drops rose petals on whoever cuts the tape for inauguration. In the last issue (Vol. III page 812) the setting up of Industrial Consultant Physicians was referred to. In order to reduce the numbers of accidents, the Directorate of Factory Advice Services and Labour Institutes have formulated schemes to train workers and supervisors employed by Port authorities, dock labour boards and other users of the harbours. Dock safety Committees of officials and representatives of trade unions have been set up and safety-cum-training centres will be established at all major ports to inculcate safety consciousness and impart training to various categories of harbour workers. The Madras Port has taken the lead in this matter and has started a safety-cum-training school for the workers, as early as August 1973 under the guidance of the Port Trust chairman and the chairman of the dock safety committee. Similar training centres could usefully be started in all accident-prone enterprises. The importance of welding as a means of metal fabrication has been recognised and has become a full-fledged science rather than a skilled art. It is being taught at various levels in establishments run by government and private industries. Basic courses including technology exist in many

colleges. But what is noticed is that there is emphasis more on practice and development of skill rather than on scientific theory and often the training is restricted to the type of industry for which trainees are entertained. The Department of Metallurgy at the Indian Institute of Technology, Guindy, however, has programmes leading to post-graduate degrees in Metal Jointing and this is the only institution offering these courses in the Country. The research problems are invariably selected so as to help industries. The importance of the science of welding rather than skill in one particular aspect is emphasised. In the Guindy Institute there is a wide range of sophisticated machinery including powder spray gas torch, seam and butt welding units etc. The Indian Institute of welding was set up in 1967 for facilitating exchange of ideas and promoting research. The Madras Branch of the Institute in collaboration with the IIT, Madras organised an 'Open Day' in the metal Jointing Department where imported and indigenous instruments were displayed. Recently industries in Madras have offered scholarships to students in IIT for undertaking research in welding.

Science :

The major constraint in the liaison between industry and technological institutes for organising research work to help the former is finance. At least small industrial units do not have the resources to set up their own R & D units. The IIT has started an Industrial Consultancy Agency as a link between IIT which has the expertise and know-how and industry which needs it. The ICA will also provide all computer facilities. This organisation should prove useful particularly to industries which do not have facilities and finance for research and development. To date however few industries have taken advantage of these facilities now available at the IIT (See Vol. III page 825 seminar discussion). The Institute has also recently a installed a Rs. 1.5 crore versatile and sophisticated computer system IBM 370/155, third generation computer and the largest in the Country. This computer can perform one million operations in one second and process 450 programmes. The IIT offers training in the computer system not only to its students but also to others in other academic and R & D institutions and industrial concerns. The computer centre has been functioning since September though formally inaugurated in November 1973, and already the Indian Oil Corporation, the Indian Detonators and the Kalpakkam Atomic project are making use of its facilities. R & D in electronics is also receiving encouragement by the announcement of the Department of Electronics of grants of Rs. 25,000 free foreign exchange for every unit for R & D set up by the electronics industry. The status of the Indian Council of Agricultural Research has now been decided by the announcement in Parliament that the Council will enjoy full autonomy (See last issue, Vol. III page 811. The recruitment to the vacant posts will be by a one-man recruitment board and grievance cells are to be set up in the council to redress the grievances of the scientists. It remains to be seen how far the scientific autonomy of the council is in fact preserved. A beginning of the resolution of the conflict on agricultural research in the State between the Department and the Tamil Nadu Agricultural University (See Vol. I No 2 page 5, No. 8 page 6, Vol. II No. 11 page 35, the last issue, Vol. III page 772) seems to be in sight. The Agricultural University is to extend its research activities throughout the State, following the State government's decision to permit the University such extension of activities. The present Regional Agricultural Research Stations at Aduthurai, Kudumiarmalai, Anna Farm etc. will continue to be under

the control of the State Agricultural Department, This extension of research activities would enable the ICAR to recognise the University for purposes of the grant which may be upto Rs. 2 crores per year. The World Bank team had also previously laid down two conditions for its grant, namely that the State government should permit State wide research by the university and that the Veterinary College, now under the government, should come under the control of the university. Another World Bank team was in Madras in November discussing these aspects of the grant to the University and the earlier team's recommendation for a grant of Rs. 8.2 crores. The ICAR has now released a grant of Rs. 34 lakhs to the University for building and equipment. The University will now decide on the location of its research stations. A research station for rain-fed and irrigated crops is being located at Kaveripatnam, Dharmapuri district and two more stations are under consideration, one of which will be at Tiruchi. The University should, however, organise a mass contact programme so that its work may be made available to the farmers.

Health:

The Tamil Nadu government has sanctioned the opening of one co-operative rural dispensary in each of the 13 districts, in selected panchayats where adequate medical facilities are not available. This project is the first of its kind in the State and is a pilot project to provide employment for medical and para-medical personnel. Such co-operatives would also enable the more even distribution of doctors as between urban and rural areas, which is now 1 doctor to 1,400 persons in urban and 1 to 20,000 in rural areas (See Vol III page 42). The Union government has cleared the project and has sanctioned Rs. 4.75 lakhs for 1973-74. The co-operative aspect comes in the fact that 25 per cent of the expenditure involved is to be raised by selling shares to the medical officers (200 shares at Rs. 10) and four para-medical staff (100 shares at Rs. 10 each) for each centre and also the local public. Only nominal fees of Re. 1 for consultation and Rs. 2 for laboratory investigation will be charged. A pharmacy and clinical laboratory will be attached to each unit. The intensive house to house survey in North Madras under the Greater Madras Leprosy Treatment and Health Education scheme (See Vol. III page 196) enabled action to be taken towards the eradication of leprosy. The Madras Corporation has now started a mass filarial survey under the National Filaria Control Programme. In 12 clinics set up for this purpose, special teams will conduct the filariasis night blood survey of about 15 to 20 thousand persons in a month. Filaria has been made a notifiable disease now in order to check its spread. As the mosquito is the carrier for this disease, the corporation is intensifying its measure to control the breeding of mosquitoes. Adequate mass propaganda and health education about this disease is necessary to make people avail themselves of the opportunity offered for cure and control.

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V. Employment

The State government placed before the November 1973 session of the Assembly 8 schemes for the educated unemployed as part of its supplementary Budget for 1973-74 for Rs. 7.67 crores, out of which Rs. 3.35 crores was for the educated unemployed. The schemes are (a) the creation of 10,200 teachers posts at a cost of Rs. 1.56 crores (noted earlier) (b) Rs. 66 lakhs as loan to SIDCO for its schemes for hire purchase of machinery, to work sheds, consultancy services and feasibility studies, (c) Rs. 5.3 lakhs grants Tamil Nadu Poultry Development Corporation for providing self employment for 500 educated unemployed who would set up poultry units (d) Rs. 30 lakhs as equity participation in technicians' co-operatives (e) Rs. 2.6 lakhs for the educated unemployed schemes in the industries sector, (f) assisting 300 block level agro engineering and service co-operatives with Rs. 37.5 lakhs (g) Rs. 17 lakhs for construction of sheds and Rs. 7 lakhs as rent subsidy for enterprises started by educated unemployed and (h) establishment of new industrial estates by them at a cost of Rs. 13.4 lakhs channelled through SIDCO. The Indian Overseas Bank also started 3 schemes in November in this area. The first is to help finance the starting of nursing homes and clinics by medical graduates provided they are established in rural and semi-urban areas. After completion of the house surgeoncy, those willing to enter this programme will be given a loan to buy surgical instruments, laboratory equipment and X-ray unit and living expenses for 3 months at the rate of Rs. 350 per month. In return, the graduate must provide a surety and hypothecate the equipment, start repayment 6–12 months after starting practice and repay the loan in 30 to 40 monthly instalments. The second scheme is the loans scheme for unemployed engineers which has been liberalised. Technical cells will help the engineer to identify the production area in which he can be most gainfully employed and loan him upto Rs. 1 lakh for setting up his plant in that area. Only the factory sheds will have to be financed from other sources, possibly governmental, the other expenses being covered by the Bank. Margin requirements have been reduced in some or cancelled in other areas. The third scheme is to finance small men, like vendors and auto-rickshaw pliers for whom a special aid centre has been set up, starting in Madras city. The Syndicate Bank in Madras started a scheme in November to help lawyers. Under the scheme the cost of law books and office equipment will be covered by the credit. The Director of Industry called the attention of the 5 Chambers of Commerce in the State to the 2,000 engineers and technicians and 5 lakhs of other educated young men and women who are seeking employment. 280 engineering graduates who started their training last year have completed their course and another 576 are currently under training. The five Chambers agreed at a meeting in mid November to select educated unemployed persons from the employment exchange lists and train them under the subsidised employment scheme. Under the scheme the State government gives a subsidy of Rs. 150 to engineering graduates, Rs. 100 to diploma holders, Rs. 150 to science graduates Rs. 150 to science post graduates, Rs. 200 to architects, Rs. 150 to agricultural and veterinary graduates, Rs. 125 to commercial artists and Rs. 100 to scheduled caste graduates.

Among the series of measures to reverse the brain drain is a package scheme to attract scientists and engineers now abroad to return and start their own industries

(See last issue, Vol. III pages 209, 270, 731). The science and technology plan envisages creation of job opportunities for about a lakh of scientists and engineers during the Fifth Plan. The presesnt estimate of unemployed is 20,000 scientists, 22,000 engineers and 50,000 diploma holders. Against this background of unemployment among scientific personnel, the announcement by the ICMR that it is unable to finance even the on-going projects due to cuts in its budget is disheartening. About 1,000 projects ranging over a variety of subjects are being shelved and about 3,000 persons engaged in the collection and tabulation of data rendered jobless. Some of the research workers were preparing their doctoral theses.

The 24th session of the Labour Conference which decided many issues such as setting up a Central Gratuity Fund, a system of distribution of food-grains at controlled prices, a welfare cess of 25 paise per kg. of tobacco for beedi workers, could not agree upon a firm policy with regard to automation. The Dandekar committee report which considered this subject had set forth the result on labour and employment of an exhaustive analysis of automation including computerisation and its own conclusion on the subject. It was expected that the Conference would suggest criteria for allowing automation and computerisation in industry and suggest ways and means of avoiding harmful social effects. The consultation with the Union ministries and the State governments on the conclusions of the Dandekar report did not yield useful results as the reactions and suggestions were contradictory and cancelled each other as was to be expected. Some endorsed the conclusions, others rejected them and still others wanted the government and the management to be given absolute discretion to decide in favour of or against automation even if there is agreement between labour and employers, in the interests of the community whatever that may mean. The Conference generally approved the recommendations of the Dandekar Committee but left it to the State governments to decide in the event of disagreement in a firm between workers and employers. This leaves the issue still wide open and the current agitation against computerisation in LIC, the Railways, Oil companies, A.G.'s office etc left unsettled.

The 1971 census analysis is that in 1971 there were 180 million workers 149 million males and 31 million females. This figure includes 7.99 million boys and 2.85 mlllion grils in the age group of 0–14 (which are a part of the drop-outs, as the girls working at home are not included in this course) and 14 million workers above the age of 60. The analysis shows that there were 13 million male non-workers in the age group 20-59. If to this the number of female workers is added, we get very near the 18.7 million figure of the unemployed computed by the Bhagawati committee (See Vol. III pages 432 & 750).

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VI. Other Items

ICSSR Review Committee's Report:

Following in early December the broad discussion by the Indian Council of Social Science Research of the major recommendations of ICSSR Review Committee Report and its general endorse-

ment of the conclusions, recommendations of the Committee, the follow up action is underway under the dynamic leadership of the Member-Secretary. The recommendations are the subject of study by the Counçil's standing committees—the research projects committee, the Training Committee, the Documentation Committee and the Data processing committee, the Regional Centres, UGC and the other scientific councils (ICAR, CSIR, ICMR) and the Union and State governments who are the users of research. Its planning Committee met twice in November and early December in order to review the recommendations of the committee regarding the Fifth Plan Programme and Budget. Against the Committee's recommendations for a Fifth Plan budget of Rs. 11.6 crores, it emerges that the Council would have around Rs. 8.5 crores during the Fifth Plan calling for a certain phasing of the Committee's programme recommendations.

Indian Adult Education Association:

Following the major recommendations concerning the Association's programme and the next conference (See last issue, Vol. III pages 812-813), the Executive Committee of the Association met in early November and decided that the subject of work and study by the affiliated associations during the year should be, Adult Education in the service of the Rural Poor. In communicating this theme to all State and Regional Associations, the Associations ask them to undertake activities under five heads: (a) Techniques of literacy teaching to farmers and rural artisans, both men and women (b) Non-formal and out of school education for rural youth of the age group 16-30; (c) Training in self help for rural people and for undertaking co-operative activities, specially to reach as far as possible,- the lowest rung of the social and economic ladder; (d) formal and non-formal education programmes for rural women; (e) Vocational training and education programmes for rural people especially artisans. The activities should be reported to the Secretary for discussion by groups at the next conference which will also review the Programme and Budgets of the affiliated associations submitted to the conference. The committee also addressed an appeal to the Union Ministry of Education to reconstitute the national Board of Adult Education at an early date and called on it and the State Departments of Education to be represented at the next conference, so that its officers may have the benefit of expert advice and guidance in their work. It requested the President to call on the Education Minister and present to him these various concerns of the committee.

Planning Week:

The State celebrated the week, November 14-21, as the Planning week. All college planning forums organised during the week lectures, discussions exhibitions and seminars, on an assessment of the Fourth Plan, the outline proposals for the Fifth Plan, the State Perspective Plan. The State government organised a series of lectures, exhibitions and essay competitions during the week with a symposium on the Fifth Plan at Rajaji Hall attended by the staff and students of the Madras colleges. After a review of the constraints in the economy that have emerged during the Fifth Plan—low savings, declining investments, hyper inflation, unemployment and an inequitable factor distributive system, the symposium examined the major orientation of the Fifth Plan in terms of removal of poverty, developing a new structure of production and intensification of agricultural and industrial core sector production, decided to recommend to college planning forums to undertake detailed and continuing discussion of the Fifth Plan, organise investigations and survey of the unemployed and the rural and urban poor and

organise the unorganised rural and urban poor to take advantage of the legislation on land reform, land to landless, house sites for the poor, fair wages etc.

Second Tamil Nadu—2,000 A.D. :

The Institute for Techno Economic Studies, Madras completed its six month study of the profile of Tamil Nadu in 2,000 A.D. and presented the conclusions in 6 Volumes—Vol. I Demography, Vol. II Economy, Vol. III Resources and Environment, Vol. IV Social Service, Vol. V Transport and communications, and Vol. VI Governance—on its annual day, November 24 & 25, when the 6 Volumes were examined by a seminar of some 50 experts. This study is part of a study on India in 2,000 A.D. being sponsored by the Ford Foundation as an essay in futurology and a back drop to our perspective and medium term plans. The Tamil Nadu profile that emerges is that the population will increase from 41.2 million in 1971 to 62.78 million in 2,000 A.D., the birth rate will be reduced from 30 per thousand to 21 per thousand, with a greater degree of urbanisation, its economy will continue growing at 10 per cent, with the relative shares of the primary, secondary and tertiary sector changing from 41, 19, and 40 per cent in 1971 to 19, 41, and 40 per cent, the per capita income increasing four fold to Rs. 2,636, with one in 20 families having an air conditioner, one in ten a refrigerator, every family a television set, a bicycle, a sewing machine and electric fans and every alternate family a car. The labour force will double from 16.1 million to 31 million with no unemployment. The poverty profile today which is computed as ranging from 33⅓ to 72 per cent will be completely changed by poverty eradication programme. Detailed forecasts of industries, agriculture, animal husbandry and fisheries are made as at 2,000 A.D. The education, health, communications and social services sector would have reached a satisfactory point of development. Surplus resources in lignite, iron ore and magnesite on the one hand, and shortages in limestone, and non ferrous metals on the other are forecast. The governance pictures a fully democratic, decentralised casteless and classless society. The seminar endorsed the study, making a number of detailed suggestions for additions, deletions, modifications and expansions in each volume. A section on Tamil Nadu Institutions was suggested as an important addendum. At the concluding session, the Chief Minister also endorsed its main conclusions and pointed to the need for hard work on the part of the people to make this forecast come true. The Minister for Education formally released the 6 Volume report to the public. The report is an outstanding piece of study and can have as profound an influence on Tamil Nadu development as the State Planning Commission's Perpective Plan.

The Third Meeting of the Heads of Departments of the Social Sciences of Southern Universities

The Third Meeting of the Heads of Departments of Social Sciences of Southern Universities was held in the Seminar Room of the Institute on Friday, the 21st and Saturday, the 22nd December, 1973 under the chairmanship of Dr. Malcolm S. Adiseshiah, Director of the Institute and the co-chairmanship of Dr. E. G. Parameshwaran, Acting-Director, I.C.S.S.R. Regional Centre, Hyderabad.

The following members were present;

1.	Dr. T. Shanmugam	Psychology	University of Madras
2.	Dr. C. T. Kurien	Economics	Madras Christian College
3.	Dr. M. Abel	Polilitical Science	Madras Christian College
4.	Miss Gajalakshmi	Economics	Madurai University
5.	Dr. N. Subramanian	History	Madurai University
6.	Dr. K. H. Cheluva Raju	Politics	Bangalore University
7.	Dr. C. Rajagopalan	Sociology	Bangalore University
8.	Dr. B. Sarveswara Rao	Economics	Andhra University
9.	Dr. R. V. R. Chandrasekhara Rao	Politics	Andhra University
10.	Dr. D. L. Narayana Rao	Economics	Sri Venkateswara University
11.	Dr. N. Balakrishna Reddy	Geography	Sri Venkateswara University
12.	Dr. Gautam Mathur	Economics	Osmania University
13.	Dr. S. Manzoor Alam	Geography	Osmania University
14.	Dr. A. Ramaswami	Economics	Annamalai University
15.	Dr. G. Ramachandra Raj	Sociology	Kerala University
16.	Dr. V. Krishnamurti	Economics	Gandhigram Rural Institute
17.	Dr. Subramanian	Economics	Gandhigram Rural Institute
18.	Dr. E. G. Parameshwaran	Politics	Regional Centre, Hyderabad
19.	Dr. Malcolm S. Adiseshiah	Economics	Madras Inst., of Dev. Studies.

The following sent their regrets for non-attendance due to transportation difficulties.

1.	Dr. E. T. Matthew	Economics	Kerala University
2.	Dr. M. V. Pylee	Management	Cochin University
3.	Dr. Mohammad Mohsin	Commerce	Calicut University
4.	Dr. K. Kulandaivel	Education	Ramakrishna Mission Vidyalaya
5.	Dr. V. Anantharaman	Economics	Indian Institute of Technology
6.	Mr. J. P. Naik	Education	I.C.S.S,R., New Delhi
7.	Dr. V. Rajagopalan	Economics	Tamil Nadu Agri. University
8.	Dr. T. K. Meti	Economics	Karnatak University
9.	Dr. Gopala Sarana	Anthropology	Karnatak University
10.	Dr. C. Parvathamma	Sociology	University of Mysore
11.	Dr. G. T. Huchappa	Economics	University of Mysore
12.	Dr. V. Shanmugasundaram	Economics	University of Madras

2. Agenda

The following agenda was adopted;

(1) Exchange of views on the reports on social science research in the Universities —Papers by the members of the meeting 3HD/2 to 3HD/22

(2) The follow-up of the recommendations of the Indian Council of Social Science Research Review Committee —A note by Dr. M. Abel, Professor and Head of the Department of Political Science, Madras Christian College, Madras 3HD/30

(3) Post M.A. Courses on Research Methodology— Heads of the Departments 3HD/31 to 3HD/40

(4) An inter-disciplinary research methodology seminar of 1974—A note by Dr. Malcolm S. Adiseshiah, Director, Madras Institute of Development Studies, Madras 3HD/42

(5) Work on Production of Text-books in social sciences in English and the national languages— Report by members 3HD/43 to 3HD/53A

3. Exchange of views on the reports on social science research in the Universities

(a) *Andhra University*: Dr. B. Sarveswara Rao, Professor and Head of the Department of Economics presented his paper 3HD/19 and called attention to the problems of research development. This included (a) difficulty of attracting first class students for research, (b) the high drop-out rate, (c) the high turn over of technical staff engaged in research projects, (d) the level of teaching load of affiliated college teachers and (e) the problems of infrastructural facilities of research staff.

Dr. R. V. R. Chandrasekhara Rao, Professor and Head of the Department of Politics, introducing his paper 3HD/20 called attention to the need for developing a compendium of readiness on Research Methodology applicable to all social sciences and those applicable to each particular science. He also called attention to the drop-out rate problem due to the lack of employment opportunities.

(b) *Madras University*: Dr. T.E. Shanmugam, Professor and Head of the Department of Psychology introducing his paper 3HD/2 called to the specificity and variety of needs that the Psychology research programme serves which account for lack of drop-outs. Further the use of computers is becoming a common feature in Psychology research. The level of research depends upon the keenness of students rather than the grade he has secured in the University.

(c) *Madurai University*: Miss Gajalashmi, Professor-in-charge of the Department of Economics introducing her document 3HD/9 called attention to the problem of lack of disaggregated data in regard to the regional research studies. The lack of linguistic skills is an equally serious issue.

Dr. N. Subramanian, Professor and Head of the Department of Ancient History introducing his paper 3HD/10 called attention to the growing inter-

lisciplinary nature of and the use of qualitative methods in the field of history research.

(d) *Annamalai University:* Dr. A. Ramaswami, Professor and Head of the Department of Economics introducing his document 3HD/11 pointed to the lack of incentives and encouragement that faces the research students and proposed various means by which this gap can be filled.

(e) *Madras Christian College:* Dr. C. T. Kurien, Professor and Head of the Department of Economics introducing his paper 3HD/13 referred to the flexibility which the affiliated colleges have in organising research. Their difficulties related to the lack of sufficient research personnel and the increasing Government regulations restricting prolonged study leave.

Dr. M. Abel, Professor and Head of the Department of Political Science supporting the above needs stated that there is also a need for raising the level of the qualification of the staff and provision of research assistants to the departments.

(f) *Bangalore University:* Dr. K. H. Cheluva Raju, Professor and Head of the Department of Politics introducing his document 3HD/14 emphasised the need for more research fellowship being made available to the departments of the Universities and that of sabbatical leave for professors. The absence of library and documentation services was a great handicap to research. Many of these problems could be met by strengthening the Regional Centres of the Indian Council of Social Science Research.

Dr. C. Rajagopalan, Reader and Head of the Department of Sociology introducing his document 3 HD/18 pointed to the problems of teachers not being research oriented and inadequately qualified. They are required to spend all their time on teaching and examinations. He wondered whether the post of department Head should not be by rotation. There is need for staff to have time off for research, and also need for a survey of the number of students who register for Ph.D. and are awarded fellowships and then drop out before the completion of course. From this point of view the availability of research fellowships is not a problem.

(g) *Sri Venkateswara:* Dr. B. Balakrishna Reddy, Head of the Department of Geography introducing his document 3HD/16 called attention to the need for providing incentives to students engaged in research and not prolonging the Ph.D. courses. In this connection he raised the question of developing a common pattern in India for the evaluation of Ph. D. theses.

(h) *Osmania University:* Dr. S. Manzoor Alam, Professor and Head of the Department of Geography introducing his document 3HD/17 referred to the growing inter-disciplinary nature of Geography research in the Universities and its close relation with the utilisers of research. There are no problems of drop-outs in the programme. There are problems of the heavy teaching load of the staff, the temporary nature of project research personnel, the absence of research assistants in the department and the administrative delays between the sanctioning of the projects and their execution.

Dr. E. G. Parameshwaran, Professor and Head of the Department of Psychology and Acting-Director of the I.C.S.S.R. Regional Centre, Hyderabad referred to the problem-oriented research work being done in his department with the aid of the NCERT. The issues related to basic research and applied research were debated and their inter-related and complementary nature emphasised. There is need for more adequate provision for basic research on the one hand and incorporation of users of research in designing the problem-oriented research on the other. The sale-ability of research will then be a consequence.

Dr. Gautam Mathur, Professor and Head of the Department of Economics introducing his paper 3HD/22 called attention to the various administrative and procedural difficulties that face research in the Universities and suggested a system of delegating authority to the department as one important way out.

(i) *Kerala University*: Dr. G. Ramachandra Raj, Head of the Department of Sociology introducing his document 3HD/21 referred to the high degree of concentration on examination procedures and routines that the Universities are involved in. The various obstacles to the development of research in the Universities need thorough scrutiny.

(j) *Gandhigram Rural Institute*: Mr. V. Krishnamurti, Principal, Gandhigram Rural Institute introducing his paper 3HD/4 referred to the structure of Gandhigram Rural Institute. Work on methodology begins at the non-graduate and continues into the graduate programmes. The research department is an inter-disciplinary department and some of its staff is able to prepare for Ph.D. at Ranchi University. The problems faced are lack of finances for research, the need for a small research cell composed of statisticians and sociologists and some continuity in the research staff.

The papers on the Progress and Problems of Research in the Department by Dr. T. K. Meti, Professor and Head of the Department of Economics of Karnatak Universty, Document No. 3HD/3, Dr. V. Shanmugasundaram, Professor and Head of the Department of Economics of University of Madras, Document No. 3HD/5, Dr. C. Parvathamma, Professor and Head of the Department of Sociology, Mysore University, Document No. 3HD/6, Dr. G. T. Huchappa, Professor and Head of the Department of Economics, Mysore University, Document No. 3HD/7, Dr. V. Rajagopalan, Professor and Head of the Department of Agricultural Economics, Tamil Nadu Agricultural University, Document No. 3HD/8 and Dr. Mohammad Mohsin, Professor of Commerce, Calicut University, Document No. 3HD/15 were noted in the absence of the members, due to transportation difficulties.

Summing up the high-lights of this session, the Chairman noted the following points of concerns:

(a) The concern about the level of research students and the qualification of research staff in the Universities and colleges,

(b) The concern about the number and the timely availability of research fellowships for the research students,

(c) The need for research assistants or development of a research cell to support and promote the research work in each department,

(d) The need for developing compendiums of methodology for each discipline possibly by the Indian Council of Social Science Research Standing Committees,

(e) The need for research staff being given time off or sabbaticals together with protection of pay, for completing research work,

(f) The need for developing adequate library and documentation facilities for the Southern Universities researchers,

(g) The whole atmosphere and attitude of the Universities about research and lack of recognition of its relation to effective teaching,

(h) The problem of inter-disciplinarity in research and links with users in designing research programmes.

4. The follow-up of the recommendations of the Indian Council of Social Science Research Review Committee—A note by Dr. M. Abel, Professor and Head of the Department of Political Science, Madras Christian College, Madras 3HD/30

Dr. M. Abel, Member-Secretary, Indian Council of Social Science Research Review Committee introducing his document No. 3HD/30 called attention to the recommendations of the Indian Council of Social Science Research Review Committee as they applied to the Southern Universities in the following terms :

(a) Reform of the University System,

(b) Multi-disciplinary and Inter-disciplinary Research,

(c) Research Programmes,

(d) Regional Centres,

(e) Training Courses in Research Methodology,

(f) Documentation Centres and Data Banks,

(g) Encouragement to younger Social Scientists,

(h) Committee for the Promotion of Social Science Research in South India.

In the discussion of the Indian Council of Social Science Research Review Committee Report the following observations and recommendations were made:

(a) The state of disciplines—pages 19 to 61 of the report—and the situation of the non-developed disciplines in terms of the ICSSR's assistance set forth in paragraph IV, 14, VII of the Report referring to Geography, Anthropology Psychology are to be noted. The critique in paragraph III 1 of the irrelevancy of current research is perhaps a little too harsh. It is noted with regret that the report does not deal with the social science aspects of History and Law. In the public administration area, the co-operation of the Government is a major decisive factor in the research. In the Psychology field, little has been done in the study on non-school going youth and problems of ageing.

(b) With regard to the inter-disciplinary priorities set forth in paragraph V 5 iii-b and c, pages 126 and 128, there was (i) general endorsement of these priorities, (ii) a call to the South Indian Universities to prepare themselves to co-operate in the 12 inter-disciplinary research programmes and (iii) a decision to take particular regional action as a group of Universities with regard to the third priority—Regional disparities and area planning. The problems of disaggregation of data to which the attention of the Planning Commission's RPC was called, and the problems of economics of technology and the study on

power structure is part of the poverty inter-disciplinary programmes were also emphasised.

(c) The recommendations concerning fellowships and publications grants in paragraphs V viii were endorsed together with the three following specific recommendations :

(i) The M.Litt. degree should be treated as a research degree eligible for the same fellowship grant as the Ph. D. degree,

(ii) The fellowships should be awarded within three months of the receipt of application, and

(iii) Through the time staggering method, fellowships should be awarded both by the New Delhi Centre and by the Regional Centre, Hyderabad. For example, New Delhi could use August-September for awarding fellowships and Hyderabad October-November.

(d) The recommendations for decentralisation set forth in Section V ii were endorsed. With particular reference to the South, it was recommended that during the Fifth Plan in references to Paragraph V ii vi, I C.S.S.R. resources should be used to develop and strengthen one single centre for the South in Hyderabad, which should function in accordance with the recommendations in paragraphs V ii v *&* 5, ii **vi**, including the setting up of the full-fledged social sciences library and documentation centre are proposed by Southern Universities seminar on Research Methodology and the project forwarded to the Council on it. The second centre in Madurai could be started during the Sixth Plan when more resources will be available to the Council.

(e) The recommendations for the National Net Work as set forth in paragraph V 7 was endorsed and it was recommended as far as the South Indian Universities are concerned that the first two Universities which should enter the net work through the establishment of inter-disciplinary cells be Andhra University and Mysore University.

5. **Post M. A. Courses on Research Methodology.** 3HD/31 to 3HD/41

It was decided to deal with this item by disciplines.

(a) *Psychology*: Mr. T.E. Shanmugam, Madras University, introducing his document No. 3HD/31 referred to the methodology courses incorporated in the M. A. programmes and those structured for M. Litt and Ph. D. programmes.

Dr. E. G. Parameshwaran, Osmania University, introducing his document No. 3HD/36 explained the methodology programmes in the M. A. courses and the papers covered in the M. Litt programmes.

(b) *Political Science*: Dr. R. V. R. Chandrasekhara Rao, Andhra University, introducing his document No. 3HD/41 explained the pre-Ph.D. programme planned and stated that this course was being examined for formal decisions on the curriculum. At the M. A. level the semester system allows for optionals in Research Methodology.

Dr. M. Abel, Madras Christian College, stated that there was no formal courses in methodology but that optionals have been introduced at the M. A. level.

Dr. K. H. Cheluva Raju, Bangalore University introducing his paper No. 3HD/37 also referred to the absence of formal methodology courses for M. A. and Ph. D. programmes and emphasised the importance of introducing such courses.

(c) *Geography*: Dr. N. Balakrishna Reddy, Sri Venkateswara University, intro-

ducing his document No. 3HD/39 described the detailed methodology programmes for M. A., M. Litt. and Ph.D. students.

Dr. S. Manzoor Alam, Osmania University also explained the structured methodology programmes for M. A. and M.Litt students.

(d) *History*: Dr. N. Subramanian, Madurai University, introducing his document No. 3HD/35 described the informal development of methodology programmes that he was developing in M. A. and M. Litt. courses.

(e) *Sociology*: Dr. C. Rajagopalan, Bangalore University emphasised the importance of distinguishing between methodology and methods and raised questions about organising courses in methodology.

(f) *Economics*: Dr. B. Sarveswara Rao, Andhra University, introduced his document No. 3HD/41 A and referred to the need for a common course for all social sciences as well as natural sciences Ph. D. students in logic, scientific method, hypotheses formulation and testing.

Dr. A. Ramaswami, Annamalai University described the new provision for dissertation for M. A. students and its acting as an introduction to methodology.

Dr. C. T. Kurien, Madras Christian College referred to the importance of methodology as the epostemology for economics research.

Summing up the Chairman referred to the varying situation of methodological courses in Social Sciences research in the South Indian Universities, with the marked development as far as Psychology and Geography are concerned. The was also agreement on the importance of this programme, though its relation to M.A., M.Litt. and Ph.D. still needs clarification. There was agreement about distinguishing between methodology and methods and the importance of developing general courses for all research students in which connection a compendium of writings, if published by the ICSSR would be of value. Methodology programmes should also be individually oriented to meet the need of each student.

The papers on Research Methodology by Dr. T. K. Meti (Karnatak University) 3HD/46, Dr. V. Shanmugasundaram (Madras University) 3HD/33, Dr. C. Parvathamma (Mysore University) 3HD/44, Dr. G. T. Huchappa (Mysore University) 3HD/45, Dr. V. Rajagopalan (Tamil Nadu Agricultural University) 3HD/34 and Dr. Gopala Sarana (Karnatak University) 3HD/38 were tabled.

6. An Inter-disciplinary research methodology seminar in the summer of 1974–A note by Dr. Malcolm S. Adiseshiah, Director, Madras Institute of Development Studies, Madras. 3HD/42.

The Chairman introduced his document setting forth proposals for an Inter-disciplinary Seminar in the summer 1974.

In the discussions of the conceptual background to the seminar proposal, the following points were made:

(a) The emphasis on inter-disciplinary research and the definition of disciplinary, inter-disciplinary and multi-disciplinary research given in the paragraph III (9) (ii) of the Review Committee are sound.

(b) The problem of moving to a common concept of separating concepts from tools, and the relevance of all this for policy and action need further study investigation.

(c) The delimitation of concepts, their abstraction from reality in order to develop precise tools must now begin to be reversed.

(d) Inter-disciplinary research must be based on the development of disciplinary research.

(e) Inter-disciplinary research is problem-oriented research and becomes fruitful against the background of action research.

(f) While multi-disciplinary research is an inter-action of ideas through different persons, inter-disciplinary research usually depends on such inter-action in a single person. In a sense, inter-disciplinary research is formalising long-standing practices of discipline using the concepts and tools of other disciplines.

(g) Inter-disciplin[illegible]search represents an approach to [illegible]ng problems. It raises several questions which need to be examined and resolved over time.

Against this general discussion, it was decided that the Madras Institute of Development Studies should organise an inter-disciplinary research seminar in the ICSSR Regional Centre, Hyderabad in the following manner :

Theme :	"WHO ARE THE POOR ?"
Place :	ICSSR Regional Centre, Hyderabad
Dates :	April 1-13.
Particulars :	The present 30 members plus Prof. K.S. Parthasarathy of Andhra University and Prof. K. S. Sonachalam of Sri Venkateswara University and others to be decided by the two Directors upto a maximum of 35. Two places may be offered to Social Scientists outside the South Indian University, possibly to the Nagpur University.
Papers :	It was agreed to invite two persons each from economics, sociology, psychology, political science, geography and education, as well as an applied scientist Dr. Swaminathan and a human scientist Dr. Dayakrishna to write papers on the subject, setting forth (a) ideas, approach and tools of the discipline, and those borrowed or that could be borrowed from other disciplines and (b) the border areas.

Resource Persons :

The following persons were suggested as Resource Persons, of whom two might be invited for each week of the Seminar :

Dr. Rajni Kothari,

Dr. Tapas Mazumdar,

Dr. S. C. Dube,

Dr. Ravi Mathai,

Dr. Rasheed-uddin-Khan

Dr. Dandekar.

This list might be completed by the two Directors.

Director of the Seminar : Dr. M. F. Jussawalla

7. **Work on Production on Text-book in Social Sciences**—to 3HD/43 3HD/53

Economics : Dr. B. Sarveswara Rao (Andhra University) introducing his document 3HD/53-A referred to the 10 text books and the four monographs in Economics in Telugu which have been developed by his University under the Telugu Academy.

Dr. D. L. Narayana (Sri Venkateswara University) explained the writing of four text books in Economics in Telugu by his University.

Dr. Gautam Mathur (Osmania University) in his document 3HD/53 referred to the eight text books in Telugu being developed by his University and one text book in English on Industrial Distribution.

Dr. A. Ramasami (Annamalai University) introducing his document 3HD/48 referred to the text book in English being developed by him on Agricultural Economics and one translation.

Psychology : Dr. T. E. Shanmugam (Madras University) introducing his document 3HD/43 referred to the four text books in Tamil and the three text books in English developed by his Department. He referred to the problems faced in producing Tamil college text books.

Dr. E. G. Parameshwaran (Osmania University) introducing his document 3HD/49 referred to the three text books Psychology in Telugu developed by his Department.

Geography : Dr. K. Balakrishna Reddy (Sri Venkateswara University) introducing his document 3HD/51 referred to three text books written in Telugu by his Department.

Dr. Manzoor Alam (Osmania University) referred to the text books in Telugu being developed by his Department and the work on English text books.

History: Dr. N. Subramanian (Madurai University) introducing his document 3HD/47 referred to the four text books in history developed by his department and some translation.

Mr. Krishnamurti (Gandhigram) referred to community development text book

which has been established in English by his Institute.

Political Science: Dr. R. V. R. Chandrasekhara Rao (Andhra University) introducing his document, described the four text books in Telugu that have been developed by his University.

Dr. K. H. Cheluva Raju, introducing his document 3HD/50 (Bangalore University) referred to the preparatory work being done by the Board of studies for text books production and the problems faced in developing Kannada text books.

Sociology: Dr. C. Ramachandra Raj (Kerala University) spoke of the problems faced in developing Malayalam text books.

Dr. C. Rajagopalan (Bangalore University introducing his document 3HD/52 explained the problems faced by his department in its text books programme.

The papers on text books by Dr. G. T. Huchappa (Mysore University) Document No.3HD/45, Dr. C. Parvathamma (Mysore University) Document No. 3HD/44 and Dr. T. K. Meti (Karnatak University) Document No. 3HD/46 were noted in their absence.

Summing up, the Chairman pointed to the very rapid and high level development on text books in Telugu because of the well organised Telugu Academy. In this connection, it was noted that it was desirable that the authors should be post-graduate teachers, where necessary, qualified in statistics and use illustrations from the Indian scene. The programme was successful because there is full use of University professors in this programme. Other States could follow rhis successful example for the production of text books.

Fourth Meeting of the Advisory Committee of the Madras Institute of Development Studies

1. **Attendance**: The Fourth Meeting of the Advisory Committee was held in the Seminar Room of the Madras Institute of Development Studies on Monday, 24th December, 1973 at 10.30 a.m. with the following attendance:

Dr. N. Subramanian
Professor of Ancient History,
University of Madurai, Madurai-2.

Mr. M. N. Rao, Secretary-Partner,
M/s. Seshachalem Book Publishing Company
14, Sunkurama Chetty Street,
Madras-600001.

Dr. Malcolm S. Adiseshiah, Director,
Madras Institute of Development Studies,
74, Second Main Road, Gandhinagar,
Adyar, Madras-600020,

Dr. A. Ramaswami,
Prof. and Head of the Department of Economics,
Annamalai University,
Annamalainagar, Chidambaram,
South Arcot Dt.

Mrs. Elizabeth Adiseshiah, Co-Trustee,
Madras Institute of Development Studies,
74, Second Main Road. Gandhinagar,
Adyar, Madras-600020.

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In the absence of Chairman, Dr. N. Subramanian took the chair.

Absent

Mr. N. D. Sunderavadivelu,
Vice-Chancellor,
University of Madras,
Madras-600005.

Mr. J. P. Naik,
Member-Secretary,
Indian *Council of* Social Science Research,
I.I.P.A. Hostel Building,
Indraprastha Estate,
Ring Road, New Delhi-110001.

Dr. V. Shanmugasundaram,
Prof. and Head of the Department of Economics,
University of *Madras,*
Madras-600005.

2. **Condolence**: The death of Periyar Ramaswami Naicker was a grievous loss to the State and the Country. The Committee adopted a resolution of condolence to the bereaved family end adjourned for a *short time.*

3. **Agenda**: The Agenda as set forth in Document 4 AC/1 was adopted

   1. Approval of the Agenda
   2. Confirmation of the Minutes of the Third Meeting held on Monday, the 18th December, 1973
   3. Review of the Annual Report of the Institute for 1973
   4. Draft Programme for 1974
      (a) Studies
      (b) Monthly Seminars
      (c) Annual Conference
      (d) Research Methodology Programme
      (e) Publication
   5. Other Busines

4. Record of the Recommendations *circulated in Document* 3 *AC/5* on 19th December, 1972 was confirmed.

5. **The Review of the Annual Report of the Institute for 1973**

The *Director presented* the Annual Report* *in Document* 4 AC/3 which highlights the four trends, (a) continuing the delimitation of the Institute's functioning to development studies in the Agro-rural sectors of the State, (b) serving as a meeting ground for the *14 Southern* Universities, (c) continuing its services *in* the national setting and *(d) intensifying* its co-operation with the other institutes.

(i) The studies undertaken by the Institute during the year were:

(a) Educational Status of Scheduled Castes and Scheduled Tribes in Tamil Nadu as part of the all-India I.C.S.S.R. study by Professor S. Ramanathan.

(b) Rural Employment in Tamil Nadu by J. Viswanathamurthy which on the direction of the Director has been revised by him.

(c) Agrarian-Reform in Tamil Nadu by G. Venkataramani

(d) Minor Irrigation and its Productivity by G. Venkataramani.

* See Second article in this issue.

(e) Poverty and State-wide Distribution of Essential Goods by M. Ramamurthy.

(f) Women's Welfare—Programme and Priorities by Miss K.G.Rama —This last study received a research grant from the ICSSR.

The following two studies are still under way.

(a) Primary Education and Adult Literary by Mr. A. Joshua, and

(b) Unemployment of I.T.I. Graduates by Mrs. Hamsaleelavathi and Mr. Subramanian.

It was noted that the Study on Economics and Marketing Trends of Horticultural Products was not undertaken because the Government informed the Institute that the subject was being studied departmentally. Similarly the study on Programme and Investments for the Regional Plans was not undertaken because the plans were not ready for such study.

(ii) *Seminars*: The monthly development seminars as noted by the Committee at its third meeting was successfully carried out during the year.

(iii) *Annual Seminar*: The two day annual seminar on Plan Implementation was held on 26th and 27th October, 1973 and its follow-up is now under way. *

(iv) *The Third Meeting of the Heads of Departments of Social Sciences of Southern Universities*: This meeting was held on Friday the 21st, and Saturday the 22nd December, 1973 at the Institute and led to recommendations concerning research in the Universities, research methodology programmes, follow-up of the I.C.S.S.R. Review Committee report and decided on organising another seminar in early October at the I.C.S.S.R. Regional Centre, Hyderabad on the subject 'Who are the poor ?' **

(v) *Seminar on Research Methodology*: In place of the annual workshop for Ph.D. economic students, a two week seminar for Professors of Southern Universities on Research Methodology was held at Karnatak University, Dharwar, from May 21st to June 2nd. It was assisted by Dr. K. N. Raj, Dr. (Miss) K. R. Ranadive, Prof. Subramaniam Swamy and Dr. S. K. Goyál as Resource Personnel. Its main recommendation was to set up a social science library and documentation centre for the Southern Universities which is being followed up by the Institute with the I.C.S.S.R. ***

(vi) *Publications*:

(a) *Bulletin*: Volume III of the monthly Bulletin of the Institute was published in eleven issues. The May-June issue was a combined one. The two special issues were—the combined May and June issue and the December issue. The Bulletin continued to be published by St. Louis Press, Adyar.

(b) A Guide to Research in Economics edited by Dr. C. T. Kurien,

(c) Land Reform in Tamil Nadu by G. Venkataramani

Other manuscripts ready for publication are:

(a) Introduction to Mathematical Economics and Economics Statistics by N. Rajagopala Rao and N. Lakshmana Rao

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* See Vol. III page 556-565

** See previous section

*** See Vol. III pages 606-611

(b) Poverty and State-wide distribution of Essential Goods by M. Ramamurthy and

(c) Minor Irrigation and its Productivity by G. Venkataramani.

(vii) *Fellowships*: The I.C.S.S.R. fellowship award to Mr. Medani of Sudan was completed in March. His study on Educated Unemployment in India is now under review. The U.G.C. fellowship to Prof. N'Diaye from Dakar is held at the Annamalai University.

(viii) The Committee noted the annual income and expenditure account for the year ending 31st March, 1973 and the Balance Sheet as on that date.

6. Programme for 1974: The Committee reviewed the programme proposed for 1974 in Document 4 AC/4 and noted and made the following recommendations.

(a) *Studies*: On the basis of the consultations with Secretaries to Government in Agriculture, Rural Development, Social Welfare and Labour and Employment about the policy-oriented studies that the Institute could undertake in 1974 to help them in their work and on the basis of primary data documentation that they will make available together with services of a Liaison Officer for each Study, and consultations with the ICSSR and Universities, the following suggestions have been received for 1974 studies:

1. Economic Status of Small Fishermen and facilities for marketing their product,
2. Operational efficiency of small and medium plantations,
3. Economics of Graduate Unemployment,
4. Educational Profile of Job Requirements,
5. Impact of Rural Development on the Rural Economy,
6. The Relation between Rural Poverty and Rural Underemployment.

Taking into consideration the spill over of 1973 studies into 1974 and the requests that have been received for 1974, the studies programme for 1974 will be as follows:

1. *Educational Status of Scheduled Castes and Scheduled Tribes in Tamil Nadu*: This study by prof. S. Ramanathan for the I. C. S. S. R will be completed by the end of February, 1974. It contains four sections. The condition of Scheduled Castes students in the schools and colleges in the State. The condition of Scheduled Tribes students in the schools and colleges. The possibility of publishing this study will be examined.

2. *Rural Employment in Tamil Nadu*: The editing and reorienting of this study by Mr. J. Viswanathamurthy is being undertaken by Mr. C. L. Narasimhan and the Director. It will be completed by the end of March, 1974.

3. *Primary Education and Adult Literacy in Tamil Nadu*: This study by Mr. Joshua which has been in process for two years will be completed in 1974, using all the material that the Department and the State Planning Commission's Task Force on Education has recently made available.

4. *Unemployment of I. T. I. Graduates*: This study by Mrs. Hamsaleelavathy and Mr. Subramanian will complete the collection of

data by the end of January and the analysis and establishment of recommendations for action on the demand and supply side of the problem by June, 1974.

These four studies referred to above are spill overs from 1973. The new studies proposed are :

1. **Economic Status of Small Fishermen in Tamil Nadu:** The mechanised boats that are now coming into use to accelerate the fishing industry in the State raise the question of the status and feature of the 10,000 small fishermen. The questions to be studied are : what are the effects of mechanised fishing on the catch and incomes of small fishermen who rely on the catamaram for their fishing? What should be the changes in economic and social policy to assure them a living income? What kind of facilities should be developed for marketing their raw fish which has no access to cold storage facilities? The documentation available with Department on Small Fishermen will be analysed to establish recommendations for ensuring an adequate economic and social status for them and propose a marketing plan for their products.

2. **Operational Efficiency of Small and Medium Plantations** : This State has the largest number of small and medium Plantations. Their per acre production, the programme of replanting, their labour and capital costs, their processing and marketing arrangements all indicate a declining trend. The impact of internal and international price movements on their operations needs examinations. It is proposed that the documentation from the Department and UPASI be analysed with a view to (a) identifying the current problems faced by small and medium plantations and (b) proposing a programme to increase and improve their operational efficiency.

3. **Educational Profile of Jobs in Tamil Nadu** : Thare is a growing variance between the educational qualifications of potential job holders and the educational requirements of various jobs. Employers mislead the educational institutions and the educated personnel in using University degrees and diplomas to describe the entrance qualifications for their jobs. In actual fact the skills required for particular jobs are quite different from what the average graduate brings to it. A number of job descriptions will be examined and interviews with employers organised in order to identify the pricise educational qualifications needed for some dozen types of jobs.

4. **Impact of Rural Development Programmes on the Rural Economy** : During the Four Five Year Plans Rs. 600 crores have been invested by the State in Rural Development—what has been the impact of this programme on the living levels of the rural people and upon the infrastructure of development in the rural areas. For this purpose four districts of the State will be taken every year and the indicators of development in the rural economy investigated in relation to the two decades of investment in rural development.

5. **Relation between Rural Poverty and Rural Under-employment** : On the basis of the 1973 study of poverty in the State and State-wide distribution of essential goods, a more detailed and specific study of under-employment in the rural area and its relation to poverty will be undertaken. For an intensive study in depth two predominatly agricultural districts, Thanjavur and Tirunelveli will be taken and the nature, form and extent of under-employment investigated together with its effect on where it places the families in regard to the State's poverty line. The study will also include an examination of the

CREP and SMIP on under-employment and in light of the constraints recommend a programme for countering under-employment in those two districts. This study will be put up to the I. C. S. S. R. for financing.

(b) *Monthly Seminars*: The 1974 monthly seminar membership will be :

	Name	*Subject*	*Residence*
1.	C. M. Abraham	Sociology	Madras
2.	M. S. Adiseshiah	Economics	Madras
3.	M. S. Appa Rao	Business Management	Madras
4.	B. Ardhanareeswaran	Social Science	Madras
5.	M. V. Arunachalam	Business Management	Madras
6.	B. N. Chinnappa	Statistics	Madras
7.	S. V. Chittibabu	Education	Madras
8.	A. Devasia	Economics	Madras
9.	A. Hamsaleelavathi	Demography	Madras
10.	A. Joshua	Education	Madras
11.	K. Jhaveri	Human Science	Pondicherry
12.	V. C. Kulandaiswamy	Technology	Madras
13.	C. T. Kurien	Economics	Madras
14.	J. P. Naik	Education	New Delhi
15.	T. S. Narayanaswamy	Journalism	Madras
16.	T. V. Natarajan	Political Science	Madras
18.	K. K. Pillai	Social Science	Madras
19.	S. Pothan	Law	Madras
20.	C. D. Rajeswaran	Economics	Madras
21.	P. V. Raj Kumar	Economics	Madras
22.	J. Ramachandran	Political Science	Madras
23.	A. Ramakrishnan	Science	Madras
24.	S. Ramathan	Sociology	Madras
25.	R. Ramanujam	Economics	Madras
26.	M. N. Rao	Business Management	Madras
27.	S. Sampath	Technology	Madras
28.	M. R. Santhanam	Economics	Madras
29.	V. Shanmugasundaram	Economics	Madras
30.	C. Subramaniam	Planning	New Delhi
31.	M. Thomas	Human Science	Madras
32.	T. S. Venkataswami	Economics	Madras
33.	R. Venkatraman	Planning	Madras

The programme as approved by the Seminar will be:

Theme : **Tamil Nadu's Fifth Five Year Plan**

Subject	*Author*	*Chairman*	*Date*
Tamil Nadu Economy 1972	R. Ramanujam	Mrs. B. N. Chinnappa	Thursday, 31st Jan.
The Fifth Plan—A Critique	C. T. Kurien	V. Shanmugasundaram	Thursday, 28th Feb.
Science and Technology in The Plan	S. Sampath	A. Ramakrishnan	Thursday, 28th March
Health and Family Planning	A. Hamsaleela-vathy	M. S. Appa Rao	Thursday, 25th April
	NO SEMINAR		May
Backward Class Welfare	S. Ramanathan	K. K. Pillai	Thursday, 27th June
Industries in the Fifth Plan	V.C. Kulandai-swamy	T.V. Natarajan	Thursday, 25th July
Agriculture in the Fifth Plan	P.V. Rajkumar	A. Devasia	Thursday, 29th Aug.
Informal Education	S.V. Chittibabu	J. Ramachandran	Thursday, 26th Sep.
District Plans	C.M. Abraham	C. T. Kurien	Thursday, 31st Oct.
Plan Implementation	T.V. Natarajan	M. N. Rao	Thursday, 28th Nov.
Financial Frame of the Plan	V. Shanmuga-sundaram	T. S. Venkataswami	Thursday, 26th Dec.
Tamil Nadu Economy, 1973	T.S. Venkata-swami	A. Devasia	Thursday, 30th Jan. 1975

It is proposed to provide each paper writer with 20 copies of reprint of his Seminar paper as published in the Monthly Bulletin.

(c) *Research Methodology*: It in proposed to organise in the Regional I.C.S.S.R. Centre, Hyderabad a two week inter-disciplinary research methodology Seminar in the summer of 1974. 30 Heads of Social Science Departments from the Southern Universities will work on developing inter-disciplinary concepts and tools around a common theme—the poverty problem.

(d) *Annual Conference:* The annual conference of the Institute to be organised

in co-operation with the Institute for Techno-Economic Studies for the State Planning Commission and the Department of Industries will be on the development of small and medium industries in Tamil Nadu during the Fifth Plan.

(e) *Fourth Meeting of Heads of Departments of Social Sciences*: The Fourth meeting of the Heads of Social Science Departments of Southern Universities was held in December in order to plan a workshop on inter-disciplinary research methodology and review the status of research in the social sciences in the Southern Universities.

(f) *Publications*: The publications programme for 1974 of the Institute will be:

(i) The Monthly Bulletin: There will be 11 issues of Vol. IV of the Bulletin. There will be no issue in May. Numbers 5 and 6 will be issued in June as a special issue with the results of the fourth census of social science research in the State. Number 12 in December will be a special issue with a selection of the papers written for the inter-disciplinary research methodology seminar and the annual conference on medium and small industries.

(ii) Mathematics and Statistics for Economics

(iii) Minor Irrigation and Productivity in Tamil Nadu

(iv) Poverty and Wage Goods in Tamil Nadu

(v) Women's Welfare in Tamil Nadu

(vi) Rural Employment in Tamil Nadu

(vii) Primary Education and Adult Literacy in Tamil Nadu.

In 1974 the contractual arrangement with M/s. Sangam Publications will be continued.

7. **Other Business**: It is proposed that the Institute should explore the possibility of publishing in Tamil simple pamphlets on current economic problems.

December (1973) Development Seminar:

The December Seminar paper, Capital Formation and Resource Mobilisation, by Dr. V. Shanmugasundaram, Professor and Head of the Department of Economics, Madras University, together with a summary of the discussion of the paper at the seminar under the chairmanship of Mr. R. Venkataraman, appears as the first article.

Second Article:

The Annual Report of the Madras Institute of Development Studies 1973 appears as the second article.

Correspondence:

Some conclusions of a Gandhigram study on small scale industries appears in the Correspondence Section as a comment on the first Article in the last issue (Vol. III page 817-825).

CAPITAL FORMATION AND RESOURCE MOBILISATION

By

DR. V. SHANMUGASUNDARAM

Professor of Economics, University of Madras, Madras-5

1.0 THE BACKGROUND:

The aim of Capital Formation and Resource Mobilisation is to ensure that there is doubling of per capita income between 1973-74 and 1983-84. The strategy is that of doubling the per capita real income with 1970-71 as base. The choice of the base year is becoming more difficult to defend; And more on it later. To ensure this doubling we have to generate an income flow over the entire period such that at the end of 1983-84 the per capita income of Tamil Nadu would be Rs. 1,164. This amounts to doubling the income of Rs. 582. The manner of doubling would reveal the real process of Capital Formation.

1.1 The Disclaimers:

The disclaimers on capital formation are on two counts: First, human capital which is not discussed here; and second, physical capital, in respect of which the methodological issues are the best, second best and the sub-ideal. The best method is to undertake a flow of funds analysis. This requires elaborate surveys for new data, checking of the existing statistical series and identification of regional accounts of the total national account. In the absence of such accounts we have to utilise the accounts of slected corporate firms, households in urban areas, farm enterprises and rural areas. The government accounts use the savings rates, applicable to these activities for the purpose of estimating the savings rates in Tamil Nadu in different activities. Thus the capital formation year after year can be understood. However, even this method is not possible. Therefore, we are left with the least valid method. The National Income figures and State Income figures that we get are gross approximations and these estimates are continuously revised such that not before two or three years have lapsed does it become possible for us to get the actuals of Net-Domestic Product (N. D. P) for each State.

2.0. CAPITAL: INCOME RELATIONSHIPS:

2.1. The Increase in per capita Income:

With a view to doubling the per capita income at the end of the Perspective Plan period i.e. 1983-84, we may step up the rate of human and material investments—sectoral and overall—in the course of the ten years 1974-75 to 1983-84. The per capita income of 1970-71 was estimated at Rs. 586. On account of revision of the sectoral contributions and the choice of 1971 census figures, there is a marginal change in per capita income to Rs. 582 and the doubling of it would mean per capita income in the range Rs. 1,164 to 1,172 per head in 1983-84 at 1970-71 prices. The population of Tamil Nadu in 1970-71 was 411 lakhs. Taking into account the present birth rate which is lower than the rate for India as a whole (35 per 1,000 against 42 per 1,000), the impact of the family planning programme

which would result in a decline in the general fertility rate, the future population of the State is estimated at 440 lakhs in 1973-74, 489 lakhs in 1978-79 & 537 lakhs in 1983-84.

The population of the State in 1983-84 multiplied by the desired per capita income of that year would give the total income required in the target year (i.e. 537 lakhs × Rs. 1,164 = Rs. 6,248 crores). This is to be compared with the State Income figures in 1973-74 in order to estimate the absolute income increase needed in the Perspective Plan period. Estimates of income made by the Directorate of Statistics for the four years 1968-69 to 1970-71 (Revised Series) show an annual income increase of 5.3% * Assuming that the average annual rate of increase over the three year period 1971-74 is 5 per cent, Net Domestic Product in 1973-74 will be Rs. 2,768 crores (at 1970-71 prices). The difference between this amount and the desired income in the target year namely Rs. 6,248 crores is roughly Rs. 3,480 crores and this increase in absolute terms has to be achieved over the ten year period.

2.2. The Investment Required :

It would be possible to estimate the investment required in order to realise the income targets. On the basis of the observed relationship between investment and income generated in the different sectors of the economy over the period 1964-65 to 1970-71, the Incremental Capital Output Ratios (ICORs) for the Tamil Nadu economy for the Fifth Plan have been assumed for the Sixth Plan. Table I presents the sectoral and overall ICORs for the Fifth and Sixth Plan periods.

TABLE : 1 *Incremental Capital Output Ratios in Tamil Nadu Economy*

	ICOR	
	Vth Plan	*VIth Plan*
1. Agricultural Production	1.8	1.5
2. Animal Husbandry Fisheries and Forestry	1.2	1.0
3. Mining and Manufacturing	4.4	4.4
4. Electricity	17.4	16.0
5. Small Enterprises	1.0	0.8
6. Transport and Communications	3.0	3.1
7. Other Services	3.0	3.1
AGGREGATE RATIO	2.92	2.75

* The average annual increase in Net Domestic Product over the period 1966-67 to 1970-71 was 5.0%

These ratios, including the overall one, are not likely to remain constant over the period. They would change according to the pattern of investment adopted, technological changes and improvements in the quality, efficiency and productivity of the factors as well as the structural and organisational changes in the economy. In fact, in a low income economy where development is planned, it would be desirable to bring about a gradual fall in the ratios which implies, in general, a better utilisation of the scarce resources of the country. It is expected that in the course of the next six or seven years, heavy investments in economic overheads and in some major industrial complexes will be made by the Union Government—Kalpakkam, Manali, Tuticorin, Salem. The gestation period for these projects is bound to be long. But against this has to be set the fact that an effort will be made by the State to devote special attention to quick yielding investments in agriculture and rural industries and also to reduce as far as possible the margin of existing idle capacity in major industries in the State. Hence all in all, it is reasonable to presume that the overall ratio of 2.92 : 1 will hold good for the Fifth Plan period.

2.3 **The assumptions** :

To be logical, in computing the incremental capital output ratios, the lag between investment and incremental output must be taken into reckoning. How ever, the State Planning Commission is beset with the same difficulties as the Union Planning Commission on account of inadequate information on time phasing of projects. Therefore, following the practice of the Union Planning Commission, the incremental capital output ratios presented in Table I have been computed by dividing total investment in a period by the incremental in value added during the same period.

2.4 **The nature of the Income: Investment Model:**

Clearly, it is necessary to ensure that the growth of income over the ten year period is steady and gradual. But apart from this, the fact that income growth involves an increasing savings and investment rate has also to be kept in view. The resources available for investment can be augmented by increased voluntary savings which will be canalised into investment and also by increased taxation. This obviously involves a burden on the economy. While this cost has at any rate to be borne, it would be possible to distribute the burden equitably over a series of years by proper phasing of the investment programme. The really significant factor in this regard is the marginal rate of savings and the marginal rate of investment which reflect the extent to which additional income generated is mopped up by taxation or other means for investment purposes. These marginal rates should not exceed a bearable upper limit, and if the marginal rates are kept within limits, the average rate of savings and investment (and therefore the burden of compulsory savings) will also move up gradually at a reasonable rate. The pattern of resultant investment is likely to be as given in the model.

INCOME AND INVESTMENT MODEL (RUPEES IN CRORES)

	Fifth Plan 1974-75 to 1978-79					Sixth Plan 1979-80 to 1983-84				
	1974-75	*1975-76*	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*
	1	2	3	4	5	1	2	3	4	5
1. Income	2920	3095	3312	3578	3882	4232	4634	5097	5632	6248
2. Investment	463	543	636	746	862	992	1132	1283	1457	1652
3. Investment as percentage of income	15.85	17.54	19.20	20.85	22.21	23.44	24.43	25.17	25.87	26.44
4. Population (Crores)	4.50	4.60	4.69	4.79	4.89	4.98	5.08	5.17	5.27	5.37
5. Per Capita Income Rs.	649	673	706	747	794	850	912	986	1069	1164
6. Rate of growth of per capita income %	3.2	3.7	4.9	5.8	6.3	7.1	7.3	8.1	8.4	8.9
7. Rate of growth of Aggregate Income %	5.5	6.0	7.0	8.0	8.5	9.0	9.5	10.0	10.5	10.9
	C. O. Ratio 2·92 : 1					C. O. Ratio 2·75 : 1				

It would be seen from the Table that:

(1) per capita income doubles in a thirteen year period—1972-73 to 1983-84, i.e. from Rs. 582 in 1970-71 to Rs. 1,164 in 1983-84.

(2) the annual rate of growth of aggregate income moves up from 5.5% in 1974-75 to 8.5% at the end of the Fifth Plan and to 10.9% at the end of Sixth Plan. Correspondingly, per capita income growth rises from 3.2% to 6.3% and 8.9%.

(3) The average rate of investment i.e. investment as a percentage of the State income increases fast from 15.6% in 1974-75 to 22.21% in 1978-79 and continues to rise but at a relatively slower pace in the Sixth Plan years reaching 26.4% at the end.

3.0 THE BACKGROUND OF FINANCES:

The additional resource 70 crores was available in 1972-74 mainly from excise revenue arising out of lifting of prohibition. Another category of large incomes is from institutional agencies. The RNI loans were 6 crores as against 1 crore. State enterprises obtained 105 crores in contrast to 48 crores. Market borrowing yielded 75 crores against expected 33 crores. The LIC contributed 30 crores in contrast to 15 crores. If the same tendency continues as has been argued the finances during Perspective Plan would be as follows:

Mobilisation of Finance Resources for the IV Plan of Tamil Nadu

1969 - 70 to 1973 - 74

	Categories	*IVth Plan Resources anticipated*	*Actuals*
1.	State's budgetary resources other than negotiated loans and State's enterprises market borrowings at 1968-69 rates of taxes, electricity charges, bus fares etc.	168.36	51.00
2.	Balance from current revenue	8.46	-52.00
3.	Contribution of autonomous public enterprises	88.76	78.00
4.	State Electricity Board	88.76	78.00
5.	Road Transport Corporations	—	—
6.	Others	—	—
7.	Loans from Public (net)	67.06	60.00
8.	Share in Small Savings	33.00	38.00
9.	Miscellaneous capital receipts (net)	-44.29	-95.00
10.	State Provident Funds	15.37	22.00
11.	Additional resource mobilisations	85.00	150.00
12.	1969-70 measures	19.20	
13.	Measures to be adopted in other years	65.80	
14.	Negotiated loans and State enterprises market borrowings gross	64.00	119.00
15.	State Government	16.00	14.00
16.	LIC Loans	15.00	8.00
17.	RBI Loans	1.00	6.00
18.	State enterprises	48.00	105.00
19.	Market Borrowings	33.00	75.00
20.	Loans from LIC etc.	15.00	30.00
21.	From commercial banks	—	50.00
22.	State's total resources for the plan (1+4)	317.36	379.00

PROJECTED BALANCE FROM CURRENT REVENUE (Rs. IN CRORES)

	1974-'75	*1975-'76*	*1976-'77*	*1977-'78*	*1978-'79*	*Total for the V Plan*	*1979-'80*	*1980-'81*	*1981-'82*	*1982-'83*	*1983-'84*	*Total for the VI Plan*
Total Receipts on Revenue Accounts*	361.88	384.14	407.98	433.75	462.08	2,040.08	502.55	547.14	595.72	648.99	707.96	3,002.86
Total Expenditure on Revenue Account	396.05	420.48	454.63	493.83	531.97	2,296.97	590.32	646.55	721.95	809.14	906.61	3,674.57
Balance from Current Revenue	-34.17	-36.34	-46.65	-60.08	-69.89	-247.13	-87.77	-99.41	-126.23	-160.15	-108.65	-672.21

* The estimates are based on the assumption that total prohibition will be introduced from 1974

A Statement of Estimates of State's Resources for the Perspective Plan of Tamil Nadu

		Fourth Plan likely	Fifth Plan Esti-mates	Sixth Plan Esti-mates
1.	State's balance from Current revenue	-52	...	...
2.	Resources of the State Tamil Nadu Electricty Board	78	30	12
3.	Open market loans (Net) by the State Govt.	60	150	375
4.	Small Savings	38	100	260
5.	State Provident Funds	22	50	61
6.	Balance on Capital Account after providing for repayment to Government of India	-95	...	...
7.	Additional resources mobilisation	159	...	...
8.	Negotiated loans by the State Government			
9.	Life Insurance Corporation	8	50	100
10.	Reserve Bank of India	6	10	16
11.	Loans by State enterprises (Water Board and the Tamil Nadu Electricity Board)			
12.	From Life Insurance Corporation	30	50	80
13.	From the open market	75	200	500
14.	From Commercial Banks, Industrial Development Bank of India, etc.	50	100	200
15.	Total State's Resources	379	740	1,604
16.	Union Government Assistance	...	748	1,300
17.	Total Plan Resources	...	1,488	2,904
18.	Total Plan size	...	1,532	3,100
19.	Resources Gap ††	...	84	196
20.	Assistance to State Sector	...	500	1,000
21.	Minimum Needs Programme approved by the Union Planning Commission and fully assisted	...	148	100
22.	Aid to Madras Metropolitan Development Programmes	...	100	200
23.	Central Assistance	...	202.00	202.00
24.	Aggregate resources for the Plan (21 + 22)	...	519.36	581.00

†† to be found through additional resource mobilisation by the Union and State.

4.0 RESOURCES FOR THE PERSPECTIVE PLAN:

Estimation of financial resources for plan implementation at the State level bristles with problems.

The basic exercise is one of

—defining the strategy and the mechanism for making the savings available in the desired magnitudes for planned investment in the public sector (State and Union) and the private corporate and co-operative sectors inside the State (with additional savings from the rest of the country and the world).

However, it is not possible for the State Government alone to undertake this exercise. Under the present constitutional arrangement, the major instruments of resource mobilisation are with the Union Government and its financial institutions, and the greater part of the resources mobilised inside the State directly accrue to the Union Government. As a consequence, even the implementation of that part of the State Plan which lies within the direct responsibility of the State Government is dependent on sizable transfers of resources from the Union Government notwithstanding the fact that bulk of these resource are obtained out of the State income. Moreover, a good part of the public sector investment in the State, principally in basic industries, transport, and communications, is undertaken by the Union Government, and decisions in this regard together with the modes of financing these investments rest with the Union Government. Again, investments, in the private, corporate and co-operative sectors are largely dependent on the support from the Union Government financial institutions and the net picture in respect of outflows of private savings concering the State.

4.1 Flow of Funds Approach:

The Union Planning Commission has made an admirable beginning in presenting the resources picture of the National Fifth Plan: 1974-79 in the Flow of Funds Frame. The National economy has been divided into four sectors: (1) the public sector, (2) the private sector, (3) the financial institutions, and (4) the rest of the world; and the institutional mechanism by which savings generated in one sector could be made available for investment in the other sector has been spelt out in fair detail highlighting the role played by financial institutions as intermediaries in this regard.

Although there is considerable need for effecting methodological improvements in this exercise that deals at the national level with only all-India magnitudes, it is only logical that a beginning should be made to attempt a similar exercise at the State level. There is no denying that the methodological issues involved in undertaking such an exercise at the State level are much more complex, given the present pattern of command over resources mobilitation by the Union and State Governments and the organisational frame of their financial institutions. The Union-State and inter-State flow of funds present many intricate problems. However, there is great merit in initiating studies towards resolving the methodolical problems in this regard and launching on a study of savings in the State and their flows. Savings rate gives the flow rate of resources for planned development, and no economic exercises on Perspective Plan can be complete without flow of funds analysis. This study will be of great help in suggesting the manner of restructuring the financial flows for planning at the Union and State levels with a view to achieving higher rates of savings mobilisation and more effective deployment of the savings mobilised.

In our federal framework, it is of significant interest for a State to have knowledge of the savings generated in the State, the manner in which these savings are being utilised for the economic and social development of the State, and the contribution of the savings of the relatively advanced States to the rapid economic progress of the country and the accelerated development of the less advanced States. Such knowledge would help in promoting Union-State and inter-State co-operation in achieving growth with social justice.

4.2 Resources for the State Sector :

For the present, however, the resources perspective exercise at the level of the State Government could only be fragmentary, in view of the meagre empirical knowledge of savings in the economy of the State, and the extremely limited powers that the State Government could exercise towards effective mobilisation of savings and their deployment in the different sectors of planned investment in the State. One has to restrict oneself to attempting a few projections relating to the resources availability for the State sector of the Tamil Nadu Plan, on conventional lines that are being hitherto pursued. And even in this regard, the projections tend to become more meaningful only as the indications in respect of transfers of resources from the Union Government to the State are known sufficiently in advance and the Union Government's direct investment in Tamil Nadu is clearly identified.

5.0 DRAFT PERSPECTIVE PLAN:

In the draft plan frame for the perspective Plan 1972-84 put forward by the State Planning Commission (early in 1972), an aggregate outlay of Rs. 3,900 crores was proposed for the Fifth Plan 1974-79, and Rs. 7,400 crores for the Sixth Plan 1979-84 at 1970-71 prices. The Draft Fifth Plan prepared by the State Planning Commission envisaged the aggregate plan outlay of Rs. 3,900 as consisting of an outlay of Rs. 1,680 crores in the State Sector of the Plan, Rs. 1,010 crores in the form of Union Government direct investment, and Rs. 1,210 crores in the private sector of the Plan.

6.0 THE IMPONDERABLES:

The resources projections relating to balances from current revenues as well as balances on capital account would assume greater credibility once the award of the Finance Commission and its acceptance by the Union Government are made known on

6.01 — the principles governing the State's share in Union tax receipts;

6.02 — the grants-in-aid of revenues of the State;

6.03 — the formula for meeting relief expenditure arising out of natural calamities, and for meeting demands for higher emoluments by State employees; and

6.04 — the relief afforded in respect of the outstanding debt of the State to the Union Government.

7.0 RESOURCES FORECAST:

One way is to attempt projections of non-development and development revenue and expenditure based on the growth in real requirements under the different heads and on the assumption that the exigencies arising out of the inflationary factor, natural calamities, and the demand for parity between Union and State employees' emoluments will be looked after by the Union Government, State's own tax and non tax revenue projections could be based on the trends in the recent past and the

awareness that the limits have been reached in respect of rates of indirect taxation in the State. The re-introduction of total prohibition in 1974 would mean the disappearance of the largest single source of additional mobilisation since 1971-72. Since prohibition is an All India policy, it should be the responsibility of State Union Government to foot the entire loss due to prohibition or atleast a part of it.

7.1 Balance from Current Revenues :

The Balance from Current Revenue are based on the levels of taxes expected to be in force with effect from 1974-75 and the expenditure including the commitments of plan items becoming non plan 1974-75. The estimates of receipts are based on the assumption that total prohibition will be introduced from 1974. It is also assumed that the gap in the current revenues will be fully met by the Sixth Finance Commission. Based on this assumption the balance from current revenue has been shown as nil.

7.2 Resources from Electricity Board :

The estimates are based on the assumption that the resources will show a decline primarily due to the high burden of interest on institutional loans which had to be resorted to for rural electrification and the increasing cast of thermal generation.

7.3 Open Market Loans by State Government :

The Net Market Borrowings in the Fourth Plan is expected to be around Rs. 60 to 70 crores as against Rs. 67 crores originally agreed to by the Union Government. It is assumed that the State will be allowed to float 150 crores in the V Plan and Rs. 375 crores in the VI Plan.

7.4 Small Savings :

The share of small savings in the V and VI Plans are roughly estimated at Rs. 100 crores and Rs 280 crores respectively. The figures are based on the recent trends, the total collection of savings showing an increase from 42.29 crores in 1970-71 to Rs. 51.77 crores in 1971-72 which has raised the contribution of Tamil Nadu among the other States in India from 5.29% in 1970-71 to 10.02% in 1971-72.

7.5 State Provident Funds :

The contribution of State Provident Funds are placed as at Rs. 53 crores in the V Plan and Rs. 61 crores in the VI Plan.

7.6 Balance on Capital Account :

Based on the assumption that the Sixth Finance Commission will give sufficient relief in regard to repayment of debt due to Union Government a nil entry has been shown.

7.7 Negotiated loans by the State Government :

Negotiated loans by the State Government from the L.I.C. has been estimated roughly at Rs. 50 crores for the V Plan and Rs. 100 crores for the VI Plan.

7.8 Loans from R. B. I. :

The availability of loans has been tentatively estimated at Rs. 10 crores for V Plan and Rs. 16 crores for VI Plan.

7.9 Open Market Loans by autonomous bodies :

Autonomous Corporations such as the State Electricity Board, Tamil Nadu Water Supply and Drainage Board, Tamil Nadu Industrial Development Corporation, State Industries Promotion Corporation are expected to float open market loans to the tune of Rs. 200 crores and Rs. 400 crores in the V Plans and VI Plan respectively. The market borrowing programmes envisaged are primarily to meet the capital works programme of the Electricity Board.

As compared to Rs. 50 lakhs expected to be borrowed from Commercial Banks in

the IV Plan, the amount targetted for borrowing from the Commercial banks by the autonomous bodies is estimated at Rs. 100 crores in the V Plan and Rs. 200 crores in the VI Plan.

7.91 **Union Government** :

In the IV Plan, Union Government assistance is being given on basis of Gadgil formula. 60% of the total pool of resources is distributed on the basis of population 10% on the basis of Tax effort, 10% of per capita Net State Domestic Product and 10% on the basis of special problems.

7.92 In the Fourth Plan Tamil Nadu got only 4.7% of the total pool of Union government Assistance as against its population percentage of 7.5%. Considering that the taxable potential of the State has been exhausted and other factors, the Central Assistance has been roughly estimated at Rs. 748 crores for V Plan and Rs. 1,300 crores for VI Plan.

8.0 THE SCOPE FOR RESOURCE MOBILISATION:

In the light of the outline of the resource projections, the Scope of resource mobilisation could be as follows :

8.01 Re-structuring of Tax System

8.02 Rationalisation of Commercial Taxes

8.03 Revision of Motor Vehicles Tax

8.04 Revision of Agricultural Income Tax

8.05 Restructuring Urban Land Tax.

Under capital accounts we have to raise Market borrowings, obtain small savings, also raise funds from L.I.C. and through autonomous State Corporation. Rural saving and Rural money lending have to be regulated to ensure effective capital formation and resource mobilisation.

8 2 **Different Stages of Reasoning**

There are different stages of reasoning. The gap between the plan size and the resources which have to be found by the efforts of both the Union and State Government depends on certain basic policy issues. The more important among them are : (1) The size of the minimum needs programme which is anywhere between 150 crores and 200 crores.

(2) The volume of Union Government assistance. If this quantity is to be doubled we should get over the Fifth Plan and Sixth Plan Rs. 1,500 crores. (3) Special aid to meet the outlay under the metropolitan projects.

These issues are still before the Union Government and it will be difficult to predict the Perspective Plan requirement except in the light of forthcoming discussions between the State and the Union during December 1973 and February 1974. After the Finance Commission submits the Memorandum the issues would become clearer still.

9.0 RESOURCE MOBILISATION AND PUBLIC EXPENDITURE

The view that balance of current revenue is what it is, could be sustained in one context. That is not just one of strategies between the State Governments and Union Governments.

9.1 **Civil Service**

The revision of pay scales in the Government sector has become such a continuing phenomenon that even between the submission of the report by the Pay Commission, and the implementation of the proposals, there is a further revision and consequential hiking of outlay under the civil service salary and allowances account. Currently the D.A. and C.C.A. and allied commitments account for nearly 50 per cent of substantive normal pay. It looks

as though depending upon the price rise it would be even more in the years to come. The economic classification of the Tamil Nadu accounts revealed that wages and salaries, pension and allied items constituting the consumption expenditure now formed in 1972-73 the substantive share of Rs. 153 crores out of 357 crores. This is 43 per cent of the total current expenditure.

9.2 **Pensions**

Notwithstanding this large share the mere static sum of 5 crores for pensions needs urgent revision. The salaries and wages proper moved from 73 crores to 96 crores in just three years between 1970-73. If we allow for 20 per cent revision in three years in pension it would mean enormous financial commitment in the Perspective Plan period. Therefore allowing for mere doubling of the sum in ten years, it is in order to provide for ten crores.

9.3 **Social Services**

Another category of expenditure is recording rapid rise. Educational outlay has increased by 33 per cent in the last three years. This again could amount to morethan doubling in view of acceleration.

9.4 **Plea for Expenditure Commission**

My plea is for the establishment of Expenditure Commission. Public expenditure *prima facie* has certain characteristics (1) Security of Service, (2) Articulate trade union privileges, (3) Work under public authorities who have to set a model for employers and (4) infrequent application of productivity criteria. Apart from statistical analysis, certain hypothesis clearly emerged from the historical trends, during the period of British Administration the Civil Service and the tradition, the security and civil service responsibility. One cannot easily apply productivity criteria to new categories of outlay. The same approach seems to be dominant during the era of planning.

9.41. Second there should be a policy of mass production of essential goods and stability in the prices of goods consumed by the lower and middle income groups in urban areas. On the contrary the choices of those who have been seeking and securing higher dearness allowances are such that they are facing shortages notwithstanding the rise in money incomes. I would utter a plea for Public Expenditure Commission—rather restate my *demand made before the Fifth Finance* Commission—so that in addition to the implication of increasing Civil Expenditure, the corporate and public authorities and joint sector authorities would come under careful examination. This has found recently explicit support at least from one professional Economist[1] Prof. P. R. Brahmananda, of the Bombay University.

10.0 PUBLIC DEBT

One of the most significant features of Resource Mobilisation during the Perspective Plan is, that we have moved over from the phenomenon of financing development through budgetary surpluses to financing out of public debt. In this context the instruments of public debts assume great importance.

10 01. **Present Debt Position**

The features of Public Debt could be discussed from the constitutional and institutional standpoints. The current position of Public Debt and the likely debt obligations upto 1983-84 may also be noted. The outstanding debt on 31st March, 1974 would be 422 crores. The table below gives the repayment obligation over the 10 year period 1974-84 without any further debt commitments.

1. BRAHMANANDA, P.R. : The nature and genesis of the Indian stagflation and its control (I.F.M.R. SEMINAR, Madras—1973)

Outstanding

on 31st March 1974	1974-75	1975-76	1976-77	1977-78	1978-79	1974-79
422	46.59	61.19	41.34	39.01	28.67	217.00
On 31st March 1979	1979-80	1980-81	1981-82	1982-83	1983-84	1979-84
205	21.77	16.10	11.91	9.37	6.93	66
As on 31st March 1981						
139						

10.1 **A Constitutional Remedy**

The constitutional provision under the Government of India Act 1935 and the first Republican year 1950 looks so much alike that one wonders whether any special care had been bestowed at all in drafting these Sections.

10.11 The position despite the genuine federal constitution became such that right from the inception of the Republic, no State in debt had any power of raising loans without the consent of Union Government. The solution consists in establishing a Federal Loans Council on the model of Australian Loan Council.

10.12 The Central-States Relations Enquiry Committee (consisting of Dr. P. V. Rajamannar, Dr. A. Lakshmanaswamy Mudaliar and Dr. Chandra Reddi)- known as Rajamannar Committee have recommended a similar body, Mr. M. Maran, M.P., has put forward a demand for a similar body both in the Lok Sabha and at a recent conference of Fiscal Economics. This has also been recommended by Dr. M. Karunanidhi, Chief Minister of Tamil Nadu at First Annual All-India Conference of Fiscal Economics–Public Debt 28th September, 1973, Madras.

10.13 So far, a redeeming feature, however, is that the Sixth Finance Commission has been asked to examine the debt liabilities of the State. Apart from whatever debt redemption the report of Sixth Finance Commission will recommend one could except it to formulate standard principles for categorising the expenditure incurred out of debt, and criteria for capital transfer from the Union to the State during Perspective Plan period.

10.14 Any new enunciation of principles of statement of criteria would have only a temporary impact in the light of changing problems in different States. No State would feel that the justice has been rendered unless a federal loan council is established, to thrash out the problems that arise in respect of sharing the loanable funds in the country from time to time.

A formula acceptable to the States would be one which the States themselves agree to accept. Apart from the satisfactory fiscal relationships between several governments in India with a body suggested to take care of these, it will also increase the effectiveness of borrowing for State development and capital outlay activities pertaining to the State sector like Agriculture, Social Services, Health, etc.

11.0 INVESTMENT-SAVING MATRIX

An investment-saving matrix for the period 1974-75, 1984-85 has been prepared by the Union Planning Commission. The matrix is given hereunder. A pre-requisite for the working of this matrix is a good data base obtained through an effective survey and analysis of a flow of funds of Tamil Nadu.

Investment-Savings Matrix 1974-75, 1984-85, 1973-74 Prices (Rs. in Crores)

Sources *Uses of Funds*	Capital Transfers to						
	Public Sector	*Financial Institutions*	*Private Sector*	*Rest of the world*	*Total*	*Investment*	*Total Resource*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Public Sector							
2. Financial Institutions							
3. Private Sector							
4. Rest of the world							
5. Total							
6. Gross Saving							
7. Total Resources							

(1) Includes Union and State Governments, Public enterprises and local bodies.

(2) Includes both public and private sector institutions.

(3) Includes Capital transfers to private sector on Plan account.

(4) Excludes investment by transfer from Public Sector on Plan account.

12.0 RESEARCH AND DEVELOPMENT ISSUES :

In addition to the foregoing a few research issues may be raised (1) What is the fiscal role of the Union and State Governments in the mixed Indian Economy? (2) What is the theory behind the distribution of social goods? (3) What is the theory of social justice under the existing political and budgetary constraints? (4) How is the financial consistency built in to the Plan (a) of the public sector and (b) rest of the world? (5) What is the theory of public expenditure applicable to India? (6) What is the relevant theory of taxation and economic growth for poor countries? (7) What are the distinguishing features of socialist planning vs Capitalist programming in the Fiscal context? (8) What are the new methods of economic management in the U.S.S.R. and how far are they (a) applicable (b) inapplicable to Indian Public Sector?

In the search for the answers to these queries we may reach, if not stumble upon, some of the core strategies of New Economics which would combine the forces of materials management and human resource development planning to usher in a prosperous economy of Tamil Nadu of the 1980's.

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Summary of Discussion

At the Seminar held in the seminar room of the Institute on Monday 24th December 1973, under the Chairmanship of Mr. R. Venkataraman, former member of the Union Planning Commission the paper was presented and discussed.

The introduction to the paper defined the theme of the paper in terms of the —basic objective of the Tamil Nadu Draft Perspective Plan Frame—the doubling of the per capita income by 1984—and set out the methodological issues and the instruments of choice in assessment of the process of capital formation during the period. The paper utilised the revised data on per capita income given in the Economic Appraisal for Tamil Nadu, 1973, as Rs. 582 instead of the earlier figure of Rs. 644. The Incremental Capital Output Ratio (ICOR) for the Tamil Nadu economy varied from the ratios calculated in the Approach to the Fifth Plan and the State Perspective Plan. The calculation of the ratio of 2.92 for the Fifth Plan and 2.75 for the Sixth Plan is based on certain value judgments. In the Income and Investment model projected in the paper there are differences from the Planning Commission data. The short fall projected in the balance from current Revenue Account is based on past trends. In the estimate of the State's Resources for the Perspective Plan 24 items have been listed, and the basis of calculation will have to be spelt out in detail. The major instruments of resource mobilisation are with the Union Government and its financial institutions under the present arrangements. The Draft Fifth Plan envisages an outlay of Rs. 3,900 crores consisting of Rs. 1,680 crores in the State sector, Rs. 1,010 crores in Union investment and Rs. 1,210 crores in the private Sector. Under the Sixth Finance Commission award the central assistance is Rs. 580 crores and the quantum of direct Union Government investment and the estimates of the volume of savings available for investment are not known. Among the suggestions for Public Expenditure, increased payments under pensions, pay scales to Government employees and social services have been included. A plea is made for the appointment of an Expenditure Commission and a Federal Loans Council to ensure careful examination of expenditure by all sectors of the economy and to import greater flexibility for raising loans.

In the discussion of the paper, it was pointed out that the Income Investment model in the paper was on the basis of 1970-71 prices and could not provide an accurate estimate unless an effort was made to compute these data in current prices. The price index is expected to rise to 250 from 200 at the end of the Fourth Plan on a reasonable estimate. The growth required for doubling the per capita income, as envisaged in the Perspective Plan will be 7%. The best performance so far, however, has been about 5 per cent and earlier less than 4 per cent. Therefore, a large increase in resource mobilisation was needed if the objective is to be achieved. The computation of the relatively low ICOR appeared to be unjustified. The Revenue account also seemed to be not sufficiently realistic. The National flow of fund analysis figures were included in the R.B.I. reports. The Investment-Savings matrix exercise while feasible at the National level was frought with problems at the State level as the rest of the world statistics was at the State level an imponderable. In this context it was pointed out that the State had no record of inflow and outflow of funds. The Planning Commission found that the banks were investing more in Tamil Nadu than the actual deposits received. But the State was not

getting its proportionate share of the funds from the Unit Trust of India and the L.I.C. and therefore permission was being sought to constitute a State Unit Trust and a Regional Board of the L.I.C. The projected balance on Current Revenue account shows a chronic and increasing deficit. While the Federal Loans Council proposal had to be considered against the larger context of Centre—State finances, an easier way would probably be for the Finance Ministers of the States to meet and decide on the policy of public borrowing. With reference to sanctions required from the Centre for public borrowing by the States, it was pointed out that powers for unlimited borrowing might lead to the more advanced States in terms of deposits accumulation like Maharashtra, Gujarat, Bengal and Punjab acquiring a greater share of the available resources to the detriment of States like Tamil Nadu. A further observation was made that autonomy in borrowing might lead to a demand for the exclusive use of other resources such as the foreign exchange earned by each State. While the previous allotments of funds as on an ad hoc basis, the Gadgill formula ensures an equitable distribution of Central resources.

Suggestions made for raising additional resources in Tamil Nadu were (1) The acquisition of waste land by the State and its sale at a later data at a profit, particularly in urban areas. (2) Inter-state river projects if expeditiously carried out would mean increase of revenue from irrigated land and its produce. (3) An agricultural income-tax or holdings tax would ensure a contribution from the rural sector to the National Exchequer.

The Chairman in his review observed that in all planning, targets should be set high without losing sight of the problem and effort involved in achieving them. The doubling of per capita income was not in itself unrealizable and does not rule out an effort in this direction. The calculations of per capita income without taking into account the current prices levels is unrealistic. The rise in the price index to 250 was a definite under-estimate in light of current levels of inflation. In his Comments on the ICOR of the Fifth and Sixth Plans assumed in the paper, he referred to the statistics of the four earlier plans—where the national ICOR was 2:1 for the First Plan, 3:1 for the Second, 5.9:1 for the third and 7.7:1 for the Fourth Plan. Any attempt to carry out successfully the plan depended on holding the price line. Price rise can be held only if investments give adequate returns. An instance of performances short fall is in the field of power generation in the Fourth Plan, where an investment of Rs. 2,500 crores was expected to achieve a generation of 9 million KW, while the actual figures were Rs 2,800 crores for a power generation of 4.5 million KW. In industrial production a growth of 8 to 10 per cent was anticipated while the final figure was about 4.5 per cent in the Fourth Plan. In setting targets in all sectors, it was essential that a thorough estimate of the physical availability of materials should be made and the financial calculations made thereafter. The growth of the economy has to be through a policy of accepting development allocations in any sector without loading the allocation in favour of the preferred sector. The probable cause for deficit budgets presented by the States was the interpretation by the second Finance Commission that only States in deficit could be given Central aid. A suggestion was made for the revival of the Standing Finance Committee which had to approve projects of over 5 lakhs and those with a recurring expenditure of 1 lakh instead of the present Estimates Committee which reviewed the projects after the event and

could not enforce economy ensure adequate scrutiny. Open market borrowing constituted one of the best instruments of development finance as the money is used for national development. Tamil Nadu could afford to borrow more as its assests were 75 to 80 per cent higher than its public debts.

The paper was generally accepted as a masterly presentation of the resource mobilisation problem from the standpoint of Perspective Planning and dealt with all aspects of plan financing and capital formation. The author was paid a warm tribute for his pains-taking effort.

The Seminar observed a minute's silence in tribute to the late Mr. E. V. Ramaswamy Naicker, whose contribution to the uplift of the common man was multifaceted and memorable. It conveyed its condolance to the bereaved family.

Annual Report

OF

THE MADRAS INSTITUTE OF DEVELOPMENT STUDIES—1973

1. General

(a) With the close of 1973, the Institute has completed three years of its functioning. The delimitation of the Institute's functioning first to development studies, second to the development problems relating to this State and third to the Agro-rural sector of the State's development continued into the third year and was justified once more on several counts. From the financial and manpower point of view, the Institute's resources are limited to the capital and monthly contributions from the donor trustees as the policy of not receiving any other funds was continued into the third year (with the exception of a single project grant and two meeting grants from the Indian Council of Social Science Research and one Seminar grant from the State Planning Commission) The research staff has been maintained at four to six persons during the year. The need therefore to concentrate these limited resources on a manageable set of problems—Tamil Nadu and its agro-rural problems—has continued as the guiding principle for the Institute activities. A second reason for this concentration is the need to help the State and its many sided development problems. Till the start of this Institute, all research centres were located in other parts of the Country and were concerned with all India problems and issues. There was therefore a need for a research institute to be located in this State and along side of the work of the departments of the Universities to concentrate on the development programmes and problems of the State. This inter relation between the activities of the Institute and the State was further strengthened during the year. The studies undertaken by the Institute this year were those suggested by the various Departments of the State Government and each Department appointed a Liaison Officer who provided all the data and departmental co-operation that each study needed. In the next phase of this relationship, the Institute has been requested by the Government Departments to help them in implementing the programmes recommended by the studies and approved by the Government. A further expression of the inter-relation between the activities of the Institute and the State development programme has been the nexus of the Institute and the State Planning Commission, which has one of its offices in the Institute. The result of the studies of the Institute have been incorporated in the Fifth Plan and the Perspective Plan for Tamil Nadu developed by the Commission. The Commission's potential responsibility for Plan implementation, programme evaluation and project monitoring has been one of the major preparatory tasks for it undertaken by the Institute.

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* Submitted to the fourth meeting of the Advisory Committee of the Institute on 24th Dec. 1973.

(b) The Institute has continued serving as the meeting ground of the 14 Southern Universities through its work on economic research methodology over the past three years. The Universities fortnight seminar this year brought to head this part of the functioning of the Institute Universities co-operation through (a) the decision of the Universities' department of economics to make methodology courses a part of their post-M.A. programmes, (b) the publications on economic research methodology to be referred to later and (c) a plan for a Social Science library and documentation service for the South that the Institute has helped to develop.

(c) The Institute continued its service and work in the national setting. The Indian Council of Social Science Research invited the Institute to provide the secretariat for the I.C.S.S.R. Review Committee which was constituted on January 1, 1973 and completed by the end of October its task of reporting on the state of social sciences in India, the functioning of the Council and the future directions in which both should move. The Institute has also undertaken for the Council the State survey of the educational status of Scheduled Castes and Scheduled Tribes. The Institute has also served the Union Planning Commission in the discussions leading to the Fifth Plan and in the development of certain technical papers.

(d) The Institute's co-operative relationship with other institutes—the Institute for Techno-Economic Studies, Madras, the Centre for Development Studies, Trivandrum, the Institute for Social and Economic Change, Bangalore, the Research and Documentation Centre of the Indian Statistical Institute, Bangalore and the Regional I.C.S.S.R. Centre, Hyderabad—were continued and strengthened in joint activities such as seminars and research studies, project formation, publications and exchange of documentation.

2. **Studies**:

The status of the studies undertaken by the Institute in relation to those proposed to the third meeting of the Advisory Committee is as follows:

(a) *Education Status of the Scheduled Castes and Scheduled Tribes in Tamil Nadu*: During the year all the data relating to the Scheduled Caste and Scheduled Tribes students in the schools and colleges their hostels provision and scholarships and their educational attainment have been collected in the sample blocks as in depth field studies. The data has been tabulated by the Institute and computerised by the I.C.S.S.R. Co-ordinator. The project is in the final stages of report writing—delineating the current educational status of the Scheduled Castes and Scheduled Tribes students with recommendations for their development for the Fifth Plan. One gap in this study is that education has been defined in terms of formal education leaving out of consideration the massive problem of adult illiteracy which most seriously affects this sector of our society. This study is undertaken by Prof. S. Ramanathan with a group of investigators and research assistants working with him on short-term project base. The study conforms to the standards laid down by the I C S S R Committee and the State Government which has co-operated in it has requested a copy of the conclusions and recommendations for incorporation in its Backward Classes Programme.

Rural Employment in Tamil Nadu: The report on Rural Unemployment in Tamil Nadu was submitted before the end of last year by Mr. J. Viswanathamurthy. The Director reviewed the study and asked the research assistant to revise in light of detailed directives given to him. The revised report was submitted by the middle of the year. It still needs both editing and some technical readjustment which is being done by Mr. C. L. Nara-

simhan—the Research Officer of the State Planning Commission attached to the Institute. This study is valuable because it analyses and interprets data in an area—rural unemployment—on which there is a dearth of information. The study will not be finalised till next year. Its conclusions are awaited by the Department of Labour and Employment.

(c) *Primary Education and Adult Literacy in Tamil Nadu*: This study by Mr. A. Joshua is still continuing. The research officer also being the Deputy Director of the Institute has to find time from administration, which the absence of the Director imposes on him. With each passing month new material is becoming available so that even the points of the study which have been completed have had to be revised. It is hoped that the study will be completed next year.

(d) *Agrarian Reform in Tamil Nadu*: This study by Mr. G. Venkatramani has been completed and was published in November. Its conclusion is that the legislation on agrarian reform in the State is fairly comprehensive, it should be sharpened and improved at some points and its major short-coming is slow and poor execution. It recommends an omnibus legislation in this area and a machinery for effective and full execution. Its conclusions were presented to government in December.

(e) *Minor Irrigation and Productivity*: This study undertaken at the request of the Department of Agriculture by Mr. Venkatramani has also been completed and the manuscript is currently being prepared for publication. Its conclusion is that there is a very high pay off rate for minor irrigation in Tamil Nadu and it recommends programme of intensified minor irrigation rates. The report and the conclusions will be presented to the Government in February, 1974.

(f) *State-wide Distribution of Essential Goods*: This study by Mr. Ramamurthy was completed in September and is in the press for publication. It contains a factual analysis of who the poor are, where they are and what they are doing. It proposes a programme for the subsidised distribution of essential goods for the poorest section of the rural community whom it defines as the destitutes. These amount to three millions and the programme of subsidised distribution of essential goods would cost the Government Rs. 11 crores per annum. Even before publication these conclusions were presented to the State Planning Commission which made them its own and incorporated them in the Fifth Plan and the Perspective Plan for the State.

(g) *Womens' Welfare—Programmes and Priorities*: This study undertaken at the request of the Department of Social Welfare financed in part by a grant from the I.C.S.S.R. was undertaken by Miss K. G. Rama assisted by a team of investigators. It has been completed in December and is undergoing revision before being presented to the Government and being published. It analyses statistically the reaction of the beneficiaries to the Government's welfare programme, points out its strength and weakness and recommends on the basis of the felt needs of the receipients a much larger employment programme under the Fifth Plan.

(h) *Unemployment of I.T.I. Graduates*: This study undertaken at the request of the Department of Labour and Employment, first established a sample of 2,000 among 14,000 I.T.I. unemployed graduates who had to be interviewed. With the assistance of Mr. Subramaniam, Secretary of the Planning Commission's Task Force, a Tamil language questionnaire has been prepared and is being administered by the 13 District Planning Officers in the inter-

view of the 2,000 I. T. I. unemployed graduates. It is expected that the analyses of the resulting data and recommendations for reducing and eventually eliminating their unemployment will be completed by June, 1974

(i) *Economics and Marketing Trends of Agricultural Products* : The Secretary to Government, Agriculture who had requested this study later in the year informed the Institute that it was being undertaken departmentally and so was dropped by the Institute.

(j) *Programmes and Investments for the Regional Plans :* This programme requested by the Secretary to Government, Department of Rural Development and Local Administration was also dropped as the plans were not readied in time during the year.

3. **Seminars** :

The programme of Seminars and meetings as proposed for the year were carried out.

(a) *Monthly Development Seminars* : The Monthly Seminars held around the theme, The Perspective Plan for Tamil Nadu, used the reports of the Task Forces of the Planning Commission for the papers written on the particular subjects. The discussions were followed up in refining further parts of the Plan. The Seminars held were :

Subject	*Author*	*Chairman*	*Date*
Framework of a Plan to Abolish Poverty	C. T. Kurien	M. S. Appa Rao	Thursday, 25th January, 1973
Unemployment and Disparities in Employment Opportunities	Mrs. B.N. Chinnappa	C. D. Rajeswaran	Thursday, 22nd February, 1973
Large and Medium Industries	S. Sampath	A. Ramakrishnan	Thursday, 29th March, 1973
Education	Miss K. Jhaveri	M N. Rao	Thursday, 26th April, 1973
	NO SEMINAR		May, 1973
Animal Husbandry	A. Devasia	R. Ramanujam	Thursday, 28th June, 1973
Agriculture	T. S. Venkataswamy	R. Ramanujam	Thursday, 26th July, 1973
Power	M. V. Arunachalam	P. V. Raj Kumar	Thursday, 30th August, 1973
Social Change	C. M. Abraham	K. K. Pillai	Thursday, 27th September, 1973
Examination Reform	S. V. Chittibabu	J. Ramachandran	Thursday, 25th October, 1973
Small Industries	T. V. Natarajan	S. Ramanathan	Thursday, 29th November, 1973
Capital Formation and Resource Mobilisation	V. Shanmugasundaram	R. Venkatraman	Thursday, 24th December, 1973

(b) *Annual Seminar*: The Annual 2 day Seminar on Plan Implementation was organised by the Institute in co-operation with the Institute for Techno-Economic Studies for the State Planning Commission and the Administrative Reforms Commission on October 26 and 27 at Rajaji Hall, Madras. It was attended by 120 planners, administrators, academic personnel, District Collectors and Panchayat Union Chairmen. The Chief Minister inaugurated the Seminar and asked it to consider setting up District Rural Development Corporations/Agencies in each district as the planning and implementation agency. The Chairmen of the Administrative Reforms Commission pointed to fairly good execution record in activity production targets and the failure in attaining the social justice goals. 13 papers were presented on the various causes of failures in plan implementation and the means of overcoming them and improving execution rates and content. The Seminar evoked personal interest from planners and administrators who took personal responsibility in shaping its decisions. There was a good dialogue between State and local authorities and the base for decentralization was made and accepted. The highlight of the Seminar was the unanimously adopted recommendation which identifies the problems of plan implementation and proposes decentralisation in the form of District Rural Development Corporation/Agencies, administrative reforms, a system of monitoring and evolution and wide ranging training programme for planners and administrators to be organised by this Institute and the Institute for Techno-Economic Studies and other bodies to improve execution.

(c) *Third Meeting of Heads of Departments of Social Sciences of the Southern Universities*: The Third Meeting of the Heads of Departments of Social Sciences called by the Institute and the Regional Centre of the I. C. S. S. R Hyderabad is being held in the Institute on Friday, the 21st December and Saturday, the 22ng December, 1973. The meeting is beind attended by the following Heads of Departments:

1.	Dr. V. Shanmugasundaram	Economics	Madras University
2.	Dr. T. E. Shanmugam	Psychology	,,
3.	Dr. C. T. Kurien	Economics	Madras Christian College
4.	Dr. M. Abel	Political Science	,,
5.	Miss Gajalakshmi	Economics	Madurai University
6.	Dr. N. Subramanian	History	,,
7.	Dr. A. Ramaswami	Economics	Annamalai University
8.	Dr. E. T. Mathew	Economics	Kerala University
9.	Dr. G. Ramachandran	Management	,,
10.	Dr. M. V. Pyle	Management	Cochin University
11.	Dr. Selvaraja	Politics	Bangalore University
12.	Dr. C. Rajagopalan	Sociology	,,
13.	Dr. Huchappa	Economics	Mysore University
14.	Dr. C. Parvathamma	Sociology	,,
15.	Dr. T. K. Meti	Economics	Karnataka University
16.	Dr. Gopal Sarana	Anthropology	,,

17.	Dr. G. Mathur	Economics	Osmania University
18.	Dr. Manzoor Alam	Geography	
19.	Dr. B. Sarveswara Rao	Economics	Andhra University
20.	Dr. Chandrasekar Rao	Politics	
21.	Dr. D. L. Narayana	Economics	Sri Venkateswara University
22.	Dr. N. Balakrishna Reddy	Geography	
23.	Dr. V. Rajagopalan	Economics	Tamil Nadu Agricultural University
24.	Dr. V. Ananthararaman	Economics	Indian Institute of Technology
25.	Dr. V. Krishnamurti	Economics	Gandhigram Rural Institute
26.	Mr. R. Subramanian	Economics	
27.	Dr. Kulandaivelu	Education	Ramakrishna Mission Vidyalaya
28.	Dr. E. G. Parameshwaran		Regional Centre, Hyderabad.

The meeting's agenda covers exchange of views on research programmes and problems of the Departments, the follow-up of the I. C. S. S. R. Review Committee's recommendations by the Southern Universities and planning. Inter-disciplinary Research Methodology Seminar of 1974. A more detailed report of the decisions of the meeting will be made available at the time of the Advisory committee meeting.

4. **Research Methodology** :

In place of the annual workshop for Ph. D. Economics students this year a two week Seminar for Professors of Economics of the Southern Universities was held at Karnatak University, Dharwar from May 21st to June 2nd. The Seminar was attented by 30 professors from the 14 Southern Universities and the University of Nagpur. Dr. K. N. Raj and Dr. (Mrs.) Ranadive during the first week and Dr. Subramanya Swamy and Dr. Goyal during the second week acted as resource personnel. The Seminar discussed and adopted an outline curriculum for research methology course in a University department during the first week. During the second week the new areas of knowledge in Economics and gaps in research and the problems faced by research guides were discussed on the basis of papers prepared by Dr. V. Shanmugasundaram, Dr. G. Mathur on the first subject and Prof. Anantharaman on the second subject. To help research guides and supervisors, the Seminar decided to request the Institute to work out a project for a Social Science library and documentation Centre in Southern region which would be of help to social scientists. The Director has developed a detailed project with the help of Prof. Neelameghan, Director Documentation Research and Training Centre, Indian Statistical Institute, Bangalore, which is now under study by the I.C.S.S.R.

5. **Publications:**

The 1973 publications programme of the Institute followed the work programme for the year.

(a) *Bulletin*: The Monthly Bulletin of the Institute Vol. III was published in 11 issues. There was as notified no issue in May so that the June was the combined 5 and 6 numbers. The Bulletin has an editorial section divided into a review of (a) the general economic development in the State, India and the world, (b) agricultural developments in the State, (c) In-

dustrial Developments in the State, (d) Education, Science and Health developments, (e) the employment situation and (f) news items concerning the Institute and its involvement with various events during the month. This is followed by the monthly Seminar paper and a summary of the discussions on it. A second article being a paper by the Director prepared for one of the Seminars or Conferences in which he has participated. The special issue in June contained the results of the third social science research survey of Tamil Nadu conducted by the Institute. The special issue in December contained selected articles from or on the I.C.S.S.R. Review Committee Report, the Seminar for Research Guides and Supervisors at Dharwar and the Seminar on Plan Implementation at Rajaji Hall. The Bulletin is printed by St. Louis Press, Adyar.

(b) *A Guide to Research in Economics* : This book which is the outcome of the Research Methodology Seminars organised by the Institute was edited by Dr. C. T. Kurien. It received a grant from the I. C. S. S. R. and was published by Sangam Publishers in September.

(c) *Agrarian Reforms in Tamil Nadu* : This study by Mr. C. Venkatramani has been published in December by Sangam Publishers.

(d) *Other Manuscripts ready for Publication* :

(i) Introduction to Mathematical Economics and Economic Statistics. This manuscript arising from the two research methodology workshops, whose authors are Prof. N.Gopala Rao and V.Lakshmana Rao has been sent to Sangam Publishers who have applied to the National Book Trust for a Publication grant for its Publication.

(ii) Minor Irrication and Productivity. This manuscript based on the study by Mr. C. Venkatramani is also ready for publication.

(iii) State-wide Distribution of Essential Goods. This manuscript based on the study of Mr. M. Ramamurthy has been retitled as Poverty and Wage Goods Supply in Tamil Nadu and is also ready for Publication.

(iv) Women's Welfare. This study is now being prepared as manuscript for publication.

6. **Fellowships :**

The I. C. S. S. R. fellowships held by Mr. Medani from the Planning Commission in Sudan was completed in March. His study on educated unemployment in India is under review by the Director. The U. G. C. fellowship to Prof. N'Diaye from the University of Dakar, Senegal is being held at the Annamalai University on Dravidian linguistics.

7. **Accounts :**

The audited statement of accounts for the year 1st April, 1972-March, 31, 1973 is set forth below.

MADRAS INSTITUTE OF DEVELOPMENT STUDIES

Income and Expenditure Account for the Year Ended 31st March, 1973

Expenditure			Rs.	Ps.
To Salaries		...	19,604	81
,, Books and periodicals		...	302	41
,, Building maintenence		...	427	88
,, Conveyance		...	28	75
,, Postage and telegrams		...	1,926	35
,, Printing and stationery		...	13,971	19
,, Repairs and maintenance		...	119	93
,, General expenses		...	2,755	89
,, Electricity charges		...	622	10
,, Telephone charges		...	1,448	29
,, Bank charges		...	8	70
,, Insurance		...	500	00
,, Legal Charges		...	100	00
,, Registration and stamp duties		...	5,500	00
,, Audit fees		...	300	00
,, Depreciation				
Building 2½%	1,439 00			
Furniture 10%	2,970 07			
Electrical Fittings 10%	452 00			
Air conditioners 10%	492 00	...	5,353	00
,, Excess of income over expenditure		...	9,186	25
			62,155	62

Income			Rs.	Ps.
By Donations received		...	42,414	96
,, Miscellaneous receipts		...	4,968	21
,, Interest received	11,996 43			
Add: Accrued interest	937 50	...	12,933	93
,, Subscriptions received		...	476	87
,, Travelling expenses received	26,811 00			
Less: Travelling expenses incurred	25,440 35	...	1,361	65
			62,155	62

MADRAS INSTITUTE OF DEVELOPMENT STUDIES

Balance Sheet as on 31st March, 1973

LIABILITIES

Particulars		Rs. P.	Rs. P.	Rs. P.
Donors Trustees and Endowments				
As per last Balance Sheet	...		3,09,742 73	
Add : Additions during the year	...		1,00,000 00	
				4,09,742 73
Income and Expenditure Account				
As per last Balance Sheet Dr.	...		12,463 76	
Less : Excess of income over expenditure during the year	...		9,186 25	
Dr.	...		3,277 51	
Monograph on the Kurchiya Tribe				
Grant received		2,000 00		
Less : Expenses		1,550 00		
	...		450 00	
Economic Methodology				
Grant received		3,800 00		
Less : Expenses		3,701 20		
	...		98 80	
I.C.S S.R. Review Committee				
Grant received		40,000 00		
Less : Expenses		21,290 92		
	...		18,709 08	
I.C.S.S.R Scheduled Caste and Tribe Education				
Grant received		25,000 00		
Less : Expenses		7,376 82		
	...		17,623 18	
International Adult Education	...		754 56	
				37,635 62
Outstanding Liabilities				
Audit Fees	...		300 00	
Certificate fees	...		50 00	
				350 00
			4,47,728 35	

ASSETS

Particulars	Rs. P.	Rs. P.		Rs. P.
Buildings	57,523 00			
Less : Depreciation	1,439 00			
			...	56,084 00
Books			.	1,00,000 00
Furniture and Fixtures	28,835 00			
Add : Additions during the year	869 07			
	29,704 07			
Less : Depreciation	2,970 07			
			...	26,734 00
Electrical Fittings	4,527 00			
Less : Depreciation	452 00			
			...	4,075 00
Air Conditioners	4,295 00			
Less : Depreciation	492 00			
			...	4,433 00
Sundry Debtors				
I.C.S.S R.	400 00			
I.C.S.S.R. Women Welfare Programme	1,137 25		...	1,537 25
Deposits and Advances				
Fixed Deposit with IOB	1,50,000 00			
Telephone Deposit	360 00			
Electricity deposit	260 00			
Interest accrued	937 50			
			...	1,51,557 50
Income and Expenditure Account				
As per contra C			...	3,277 51
Cash and Bank Balances				
Cash on hand		214 08		
Cash at bank IOB S.B. A/c		40,808 93		
„ „ Current A/c		56,645 22		
„ „ SBI „ A/c		2,361 86		
				1,00,030 09
				4,47,728 35

CORRESPONDENCE

With reference to the article on Small Scale Industries in Volume III pages 817—825 it is of interest to note the descriptive and Statistical Study on Entrepreneurship in Small Scale Industries in Madurai City and its Environs carried out by The Department of Research, the Gandhigram Rural Institute of Higher Education, Gandhigram, Madurai.

The objectives on which the study is focussed are:

(i) To identify the characteristics of entrepreneurs in small scale industries in Madurai city.

(ii) To investigate the various factors that tend to influence entrepreneurship.

(iii) To understand their economic structure and to find out the adequacy of the existing supporting facilities for these industries.

The population of the study comprises all small scale industries in Madurai city and its environs (within the city Corporation limit). The unit of the study is the small scale industry and the respondent is the owner of such an industry. The reason for choosing Madurai city and its environs for the study is that it has a cluster of small-scale industries alongside of a few large scale ones. The area exhibits characteristics generally associated with rural-urban continuum; nearabout is a concentration of agriculture where high yielding varieties are grown; it has an industrial Estate, the private enterprises outside of it; the hinterland of this area is in the throes of industrial development and is an ideal region for an investigation of the pattern of industrial entrepreneurship and growth of small-scale industries.

Findings and Conclusion:

(a) *Entrepreneurial Characteristics and influencing factors on entrepreneurship:*

The small entrepreneurs in Madurai city are young men (age 33 years), a majority of whom (60%) were married at the time of starting/buying their industry. Perhaps the married status through its additional responsibilities of maintaining a family may have spurred them to exert more and more in risky business adventures for improving their economic position which, in turn, may have induced them to experiment with new ideas and practices that would promise higher returns. All this may have had some impact on entrepreneurial growth as is evidenced by a few of our case studies too.

The Nadars (19.3%) and Sourashtrians (17.3%) are the primary small industries communities in Madurai city, though there are a number of other caste affiliations to the small entrepreneurs. Generally caste is assumed to be a predominant factor in Indian entrepreneurship since it determines the traditional choice of professions and tends to delimit occupational mobility, innovation, etc. This demands further probe and data-support because in Indian industry caste is considered to be more a a permissive factor than a barrier in occupational mobility, more adaptive to changes in occupational demand-pull; and this is evident in cities and metropolitan areas.

Secondly, he is more a dependent than self-reliant because he often seeks confidence from his relatives/friends (others) in matters like finding him capital resources, extending market assistance, etc. Consequently the risk imagery may grow dim in him and his tendency is to shift risk on to others (relatives, friends) thereby preparing himself to escape innuendoes. To a large extent our case studies too support this behaviour in him.

Thirdly, as a dependent, he exhibits his desire to achieve goals; and this aspect ultimately turns him into an imitative—innovator with a need for achievement which factor is conclusive in that he may see the difficulties and obstacles in the way of achievement of his goal only in the company of others (relatives and friends). Therefore he is more a follower than a pioneer.

Fourthly, again because of his dependency and moderate traditionalism his desire to assume risk occasionally in conjunction with others (relatives and friends) he can be characterised as a risk-shifter. Such an entrepreneurial behaviour can be due to their quality of imitative-innovativeness and pre-planning capacity instrumental in mitigating the intensity of risk by depending on others.

Thus the four attributes of our small entrepreneur in Madurai city as shown by the present study area are :

(i) credit oriented pre-planning to realise aspirations

(ii) dependency

(iii) imitative-innovativeness plus a need achievement and

(iv) moderate traditionalism with occasional risk-shifting.

Now how has he grown to the present status, as a small entrepreneur ? Certain factors have been hospitable to him. He has a small family with a sound economic base to spring from, thanks to his ancestral property, prior income-push and a high level of living. Such an economic background makes for his entrepreneurial ability also. Even at lower economic levels assets in the form of jewels, land, etc. owned by a small entrepreneur provided the thrust to small entrepreneurial development. Secondly the small entrepreneur, though circumscribed by narrow official, social and expert contacts, could concentrate on production and sales; he feels less need for reinvesting his profit for further growth because of his favourable economic background of his family, Mutual help financially or otherwise also becomes less intense. In consequence profits from his industry are eaten up by personal consumptions, family functions, and social obligations. So then does he make a successful entrepreneur ? Thirdly quite possibly he may not belong to an industrial family since it was not a way of life either for his relatives or for his family members. His father's occupation or his prior occupation does not give a clue to the nature of industry he had started. He is migrant in Madurai as he has been occupationally mobile, switching from job to job before settling down on a small industry in Madurai perhaps to validate his social status. Quite likely he does not possess any political affiliation of any kind. His occupational mobility, adequate educational (including technical) qualification together ensure his knowledge and ability in administering his industry. For he is pervious to personnel training and bettering management of his industry.

(b) *Economic Structure*:

A majority of the small scale industries in our sample are proprietory (72%), newly started (96%), perennial (98%) and manufacturing (88) concerns. They manufacture iron and steel products, electrical goods, textiles, food pro-

ducts, building materials, automobile spare parts, perfumery and incense, polythene and plastics, agricultural implements, leather goods, photomount, indigenous medicine, dye and ink and chandu (tilak). The non-manufacturing concerns are mainly engaged in engineering and automobile services, electrical goods servicing, book binding and printing, agricultural implements, cycle, clock, etc., rice-hulling, tyre retreading, twisting art silk yarn and washing.

90.7 percent of the industries (both manufacturing and non-manufacturing) manufacture/service the units on demand and 80 percent of the manufacturing industries are able to find a flourishing market for their products. For 59.3 percent of the industries production shows an increasing trend every year.

Though a vast majority of the industries (96.7%) do not adopt any management and quality control technique for ensuring the quality of the product, a certain percentage of them (28%) used to conduct feasibility studies before launching on new projects in their industry.

Again a majority (85.3%) of the small scale industries have an undesirable backwash of idle capacity inspite of the increasing trend of production (in the case of 59.3% of the industries) which factor adds to the current low level of industrial production. 'Shortage of raw materials' 'lack of capital' 'lack of demand' shortage of labour' and 'labour trouble' are the causes for the idle capacity suffered by 85.3 percent of the industries.

The employment potential of a majority of the industries (72.0%) is comparatively low. Inspite of this fact, employment potential of 20.6 percent of the industries is incresing year after year. At the same time 64.0 percent of industries, as their employment potential is constant, are smooth-running and enjoy an even tenor without wide fluctuations in their growth.

Skilled labourers predominate the employment roll of 86.7 percent of the industries. In addition to the pay, 53 3 percent of the industries pay yearly bonus to their employees ranging upto 20 percent and even more; 78.7 percent of the industries recruit personnel on a casual selection basis. While selecting workers for their industry 62.7 percent go in for workers who have undergone apprenticeship elsewhere. The remaining 37.3 percent of the industries give training to their employees according to job specifications. The labour participation in the management of the industries is not favoured by 68 percent of the entrepreneurs, since according to them, it would hamper growth and spoil the peaceful atmosphere essential to smooth functioning of and fulfilling timely production targets in the industries.

A majority (87.4%) of the entrepreneurs keep records of business transactions, both financial and others, prepare the annual profit and loss accounts for increasing knowledgeability about the industries progress.

(c) *Adequacy of Existing Supporting Facilities* :

Financial assistance, supply of raw materials, provision of worksheds in the Industrial Estates as well as marketing facilities, technical training to the personnel of small scale industries and other facilities under the aegis of the State Government agencies; the technical consultancy service, help in setting up ancillary industries, economic information service, industrial management and training, export promotion services and other supporting facilities offered by the State Industries Service Institute, the service of the State Trading Corporation in exploring

foreign markets for the products of small scale industries, supply of machinery and equipment on hire purchase and also the supply of raw materials by the National Small Industries Corporation as well as by the Mineral and Metal Trading Corporation, the financial assistance given by the Handloom Finance Corporation—these supporting facilities are not utilised by a majority of our entrepreneurs, as they are not aware of their availability to the small scale industries. As almost all of them are aware of the financial assistance rendered by Banks, a majority of them have gone in for their services. Of those who availed of the facilities offered by the Department of Industries and Commerce, Small Industries Development Corporation, Tamilnadu Industrial Investment Corporation, and banks, a majority of them find the assistance/service inadequate. If the small scale industries are to develop and grow, an awareness of the supporting facilities offered by various State and Central organisations and agencies among the entrepreneurs should be created and the inadequacy should be rectified by improving the services of the organisations that are set up to foster small scale industries.

(d) *Further Assistance Required by the Entrepreneurs and Inter-firm support* :

(i) Adequate timely financial assistance comparatively at a low rate of interest, constant supply of necessary raw materials, marketing and technical guidance, overdraft facilities to meet the instant capital requirements, connote the pattern of further assistance required by the entrepreneurs from the supporting agencies.

(ii) A majority of the entrepreneurs (68.7%) used to be beneficiaries from 'inter-firm assistance', which promotes the uninterrupted functioning of their industries. They exploit their membership in trade or associations to get raw materials, finance, to redress their grievances, to obtain knowledge of the available supporting facilities, etc. Their contact with their fellow-entrepreneurs is narrow and pertains' to matters connected with their industry only. One could discuss its subtle underscoring of Indian entrepreneurship, but more data are needed to locate it as an explanation and causative variable in entrepreneurial availability and performance.

One may very well make a hunch based on the above results of the study that in Madurai city a non-inheritor-owner of an on-going small scale industry if he, by virtue of his need for achievement and imitative-innovativeness pursues planning with sufficient credit for realisation of his aspiration in a moderately traditionalistic way with occasional risk-shifting, can be an entrepreneur, *ceteris paribus*. This hypothesis needs testing, along with further refinement on the measurement of risk-shifting.

Suggestions for Action and Policy Making:

(i) *For Action*:

A samll entrepreneur today has to take advantage of the Central and State assistance in order to help disperse industries in rural and semi-urban areas, and assume social responsibilities of modernisation of the Indian rural society. Yet it is believed that compared to the vast size of India with its sprawling human resources and the dimensions of its needs, small entrepreneurs are few in number. Hence the supporting facilities to start small enterprises would fall into desuetude if too many men with the right type of attitude and qualities are not found. While it is true that in urban areas entrepreneurship is discernible even in developing societies, the rural areas are the poorer. It is the rural area which needs

the services of entrepreneurship for multiplying employment opportunities, thereby for economic upiftment; can we train individuals, to become entrepreneurs in such a context? In India Entrepreneurial Training Programmes began to take shape in the wake of the Kakinada experiment under the auspices of the SIET, Hyderabad in entrepreneurial development based on the McClellandian approach to study entrepreneurs and their qualities; one such is the 'action oriented' programmes for young engineers instituted by the Indian Institute of Technology at Delhi and Madras. Another is found ongoing in the Gujarat Industrial Development Corporation which is put through with the support of other interested agencies. This programme is specially oriented to the entrepreneurial needs of rural area development. There are programmes conducted by the SIET, Hyderabad also. More ventures of this kind to impart suitable training to educated youths of rural and urban area, unemployed engineers and technicians have to be formulated and built into the development programmes in our country because unless the right type of entrepreneurial leadership is forthcoming the industrial programmes for growth would be futile and devoid of any meaningful impact on the country's economy. Before blue prints for entrepreneurial training can be prepared, objective data on the multifaces of the small entrepreneurial man, his characteristics and influencing factors have to be gathered either for improving the existing on-going programme or for starting a new one.

Raw material:

Procurement of raw material continues to be a big problem for the small scale industrialists. In fact in our study it was found that 61.3 percent of the entrepreneurs experienced the problem of shortage and high cost of raw materials.

A majority of the entrepreneurs expressed the need to ensure an adequate supply of raw materials. Inspite of the fact that State and Central Governments have set up their own agencies like the SIDCO, the STC, the MMTC, etc. to supply scarce raw materials to the entrepreneurs, the problem persists. Ways and means may be found by both the Central and State Governments to meet reasonably the raw material requirements of the small scale industries failing which the small scale units are most likely to wallow in idle capacity checking production and encouraging soaring commodity prices, etc. In order to tackle this problem the following recommendations may be considered:

1. In granting loan to small scale industries the emphasis may be more on the prospects of the industry, the extent of its market for the products and on the entrepreneur's capacity to run his industries for profit than on the security which the entrepreneur is able to offer as at present.

2. The period of repayment and the rate of interest may be decided not on the quantum of loan but on the time cosumed by the entrepreneur for manufacturing the particular type of product for which assistance is sought.

3. There may be the involvement of selected representatives of small scale industrialists in scrutinising the application for assistance and recommending the cases to the concerned authority for sanctioning loan.

4. In the case of loans from Banks, the local Branch Manager may be empowered to authorise sanction of loan upto a higher mximum limit than at present.

5. Despite the fact that the SIDCO has branch office in Madurai city, only limited percentage of the entrepreneurs are aware of the loan scheme of SIDCO. It is high time that SIDCO explore means through effective mass media to invite the needy entrepreneurs to its doors for availing of its support.

6. Entrepreneurs of our study are equally oblivious of the financial assistance available at TNIIC, Now that TNIIC has a branch office in Madurai, it can well serve the entrepreneurs of Madurai city by creating what may be called a "Small Scale Industries Aid Wing" in its branch office.

Machinery on hire purchase :

Machinery and equipment as a problem is found only among 8 percent of the entrepreneurs. Hence inadequacy in equipment is as serious a matter for small scale industries as the shortage of raw materials or finance. While a number of financial institutions catering to the financial needs of the entrepreneurs of small scale industries has grown, their counterpart to meet the equipment requirements of the entrepreneurs is limited in number.

To overcome this lacuna the NSIC may function in conjunction with the Assistant Director of Industries and Commerce, Madurai in popularising the supply of machines on hire-purchase. Besides making this scheme more popular among the entrepreneurs of Madurai city the SIDCO may draw up suitable provisions for repair of the machines supplied by it. A start may be made by the SIDCO by employing a team of servicing mechanics to visit its client-firms so as to ensure checking and proper maintenance of the machines.

Workshed:

Want of suitable worksheds is a problem in the case of 13.3 percent of the small entrepreneurs.

It is suggested that as a means of furthering small industries growth in Madurai city the entrepreneurs who take advantage of the Industrial Estate for starting new units may be shown concessions in rent for atleast two years by charging less than the present rate of 13 paise per square foot.

Marketing:

Existing marketing facilities for small scale industries need improvement since the major problem exists among 16 percent of the entrepreneurs. In order to help further widen the market facilities for small-scale industries in Madurai city, the SIDCO may make it obligatory on the part of the beneficiaries (entrepreneurs who take advantage of its services) to sell atleast half of their output at a fair price to the SIDCO which can, in turn, resell it later. This will not only eliminate the middlemen but also help the entrepreneurs to have assured markets.

Taxation:

The high rate of existing taxation, it is opined nips off the enthusiasm of the entrepreneurs especially when they venture to organise small scale units or to expand them.

Sales tax at present ranges from 3½ per cent to 15 percent depending on the nature of the products produced. Further there is an additional charge of 5 percent on the sales tax. Besides, entrepreneurs of the small scale units have to bear other taxes like excise duty, income tax, etc. and face problems such as checkpost restrictions in respect of the movement of goods.

In such a situation the suggestions made below will go a long way in alleviating the problem of taxation.

(1) Entrepreneurs of new small scale units may be given a tax-holiday for the initial 3 years irrespective of the place of their establishment. But if they are organised in economically backward areas, the same may be extended to 5 years.

(2) An additional tax on sales in Madurai city area is imposed perhaps for the use of social overheads in the city by the small scale industrialists who are able to make a large output turnover, whereas in backward area similar industries are given concessions in respect of this surcharge. As such this additional surcharge on sales tax may be reduced or at best withdrawn.

(3) To ensure cordial relationship between the Sales Tax official and the small entrepreneurs and to facilitate quick assessment, the State Government may explore possibilities of conducting "Sales Tax Week" like the one organised by the Income Tax and Railway Departments of the Central Government.

(4) There is a paramount need to set up a high power committee to simplify sales tax rules for small scale industries.

MADRAS INSTITUTE OF DEVELOPMNET STUDIFS PUBLICATIONS

Publishers : (from whom copies may be ordered)
M/s. Sangam Publishers,
11, Sunkurama Chetty Street,
Madras-1.

I. Books Published :

1. Income Earning Trends and Social Status of the Harijan Community in Tamil Nadu
   By A. Vagiswari (Price Rs. 10/-) Demy 8VO
2. Economics of Dry Farming in Tamil Nadu
   By R. K. Sampath and Jayalakshmi Ganesan
   (Price Rs. 12/-) Demy 8VO
3. Nutrition in Tamil Nadu
   By Rajammal P. Devadas (Price Rs. 12/-) Demy 8VO
4. A Guide to Research in Economics
   Edited by C. T. Kurien (Price Rs. 30/-) Demy 8VO
5. Land Reform in Tamil Nadu
   By G. Venkataramani (Price Rs. 15/-) Demy 8VO
6. Techniques of Perspective Planning
   Edited by Malcolm S. Adiseshiah. (Price Rs. 9-40) Crown Quarto
7. Plan Implementation — Problems and Prospects of the Fifth Plan
   Edited by Malcolm S. Adiseshiah. (Price Rs. 9-40) Crown Quarto

   (Items 6 and 7 are a joint MIDS and ITES enterprise published by Tamil Nadu Government Press from whom it can be purchased)

II. In print :

8. Poverty and Wage Goods Supply in Tamil Nadu
   By M. Ramamurthy

III. Future Publications :

9. Minor Irrigation and Productivity in Tamil Nadu
   By G. Venkataramani
10. Women's Welfare in Tamil Nadu
    By K. G. Rama
11. Rural Employment in Tamil Nadu
    By J. Viswanathamurthy
12. Introduction to Mathematical Economics and Economics Statistics
    By N. Rajagopala Rao
    V. Lakshmana Rao
13. Rural Primary Education and Adult Literacy in Tamil Nadu
    By Alexander Joshua

Regd. No. M. 8831

MADRAS INSTITUTE
OF
DEVELOPMENT STUDIES
(M I D S)

The Institute founded and run by Dr. Malcolm S. Adiseshiah is a charitable trust registered under the Madras Charitable Trusts Act.

The aim of the Institute is to contribute to the economic and social development in Tamil Nadu and India.

The activities of the Institute are :

- Studies and action-oriented research in micro-development problems ;
- Documentation and library service in development programmes ;
- Exchange and dialogue at the State, National and International levels on development issues ;
- Publication of papers and research results of the institute.

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